BOROUGH OF SHREWSBURY.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

AND

SCHOOL MEDICAL OFFICER,

FOR THE YEAR

1913.

THOMAS ORR, M.D., D.Sc.,
Of the Middle Temple, Barrister-at-Law,
Medical Officer of Health,
and School Medical Officer.

SHREWSBURY:
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REPORT

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Medical Officer of Health,

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HEALTH DEPARTMENT.

STAFF.

THOMAS ORR, M.D., D.Sc.	*Medical Officer of Health*
A. BOSTOCK HILL, M.D., D.P.H., F.I.C.	*Public Analyst*
JOHN T. ADAMS	*Inspector of Nuisances*
THOMAS SPEAKE	*Assistant Inspector*
WM. CHARLES HEAS	*Food and Drugs Inspector*
FLORENCE E. BRETT	*School Nurse*
LUCY J. JESPER	*Health Visitor*
HARRY BIRRELL	*Clerk*
I. MILNE MITCHELL	*Matron, Borough Sanatorium*
FRANK FARRELL	*Inspector of Meat* *Abattoir Superintendent*

BOROUGH HEALTH OFFICES,
9 SWAN HILL,
SHREWSBURY,

28th April, 1914.

MR. MAYOR AND GENTLEMEN,

I have the honour to present to you my third Annual Report on the health of the Borough and on the administration of the Public Health Department.

I would specially refer you to the vital statistics, which indicate a lower death-rate than previously, and a very low infant death-rate which is a good indication of the effect of the sanitary improvements accomplished in recent years. Diphtheria was unusually prevalent during the year, and a full report is given of the causes tending towards its prevalence as well as the measures taken for its control. As regards other infectious diseases Shrewsbury compares very favourably with the rest of England and Wales.

The large amount of work done in improving the houses of the working classes is particularly satisfactory, and to Mr. Speake, who deals with this section of the work, a great amount of credit is due for his energy and tact in the accomplishment of the improvements.

Several matters require the consideration of the Council, and to all of these I have had occasion to draw the attention of the Council in previous reports, namely, the provision of a steam disinfector, the provision of a refuse destructor, and the making of Byelaws with respect to Houses-let-in-Lodgings.

I cannot submit this report without expressing my appreciation of the capable and thorough manner in which every member of the staff has carried out his or her duties, and extending my thanks to them personally for the assistance rendered me in the year's work.

I am, Gentlemen,

Your obedient Servant,

THOMAS ORR.

SUMMARY OF STATISTICS FOR 1913.

Area of Borough (excluding water) in acres ...	3,470
Population (Census 1911)	29,389
Population (estimated to the middle of 1913) ...	29,627
Persons per acre, calculated on population, 1913 ...	8.5
Inhabited houses (Census 1911)	6612
Births	615
Birth-rate per 1,000 persons living	20.7
Deaths	391
Death-rate (corrected) per 1,000 living	12.3
Infantile Mortality per 1,000 births	74
Phthisis Death-rate per 1,000 living	0.77
Death-rate from other forms of Tuberculosis per 1,000 living	0.16
Death-rate from all Tuberculous Diseases (including phthisis) per 1,000 living	0.94
Rateable value of the Borough	£170,821
Net proceeds of a Penny Rate	£600

Extract from the Order of the Local Government Board, 23rd March, 1891.

Art. 18.

The following shall be the duties of the Medical Officer of Health in respect of the District for which he is appointed :

(14) He shall also make an Annual Report to the Sanitary Authority, up to the end of December in each year, comprising a summary of the action taken, or which he has advised the Sanitary Authority to take, during the year for preventing the spread of disease, and an account of the sanitary state of his District generally at the end of the year. The report shall also contain an account of the inquiries which he has made as to conditions injurious to health existing in then District, and of the proceedings in which he has taken part or advised under any Statute, so far as such proceedings relate to those conditions, and also an account of the supervision exercised by him, or on his advice, for sanitary purposes over places and houses that the Sanitary Authority have power to regulate, with the nature and results of any proceedings which may have been so required and taken in respect of the same during the year. The report shall also record the action taken by him, or on his advice, during the year, in regard to offensive trades, to dairies, cowsheds, and milk shops, and to factories and workshops. The report shall also contain tabular statements (on Forms to be supplied by Us, or to the like effect), of the sickness and mortality within the District, classified according to diseases, ages and localities.

Extract from the Housing (Inspection of District) Regulations, 1910 (September, 2nd).

Article V.—The Medical Officer of Health shall include in his annual report information and particulars in tabular form in regard to the number of dwelling houses inspected under and for the purposes of Section 17 of the Act of 1909, the number of dwelling houses which on inspection were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation, the number of representations made to the local authority with a view to the making of closing orders, the number of closing orders made, the number of dwelling-houses the defects in which were remedied without the making of closing orders, the number of dwelling-houses which, after the making of closing orders, were put into a fit state for human habitation, and the general character of the defects found to exist. He shall also include any other information and particulars which he may consider desirable in regard to the work of inspection under the said Section.

Section 132, Factory and Workshop Act, 1910.

"The Medical Officer of Health of every District Council shall, in his annual report to them, report specifically on the administration of this Act in workshops and workplaces, and he shall send a copy of his annual report or so much of it as deals with this subject, to the Secretary of State."

A.—NATURAL AND SOCIAL CONDITIONS OF THE DISTRICT.

(1).—Physical Features and General Character of the District.

"The Borough comprises 3,470 acres, forming an area nearly equal in length and breadth, and roughly quadrangular. This area lies in the Valley of the Severn, having a gradual fall to the river, and varying in elevation from 150 feet to 260 feet above sea level. The geological formation is varied, the Permian red sandstone occurring in a band across the centre, with the Bunter beds of the New Red Sandstone to the north, and the coal measures to the south. The actual subsoil is, however, mainly river drift, of varying and generally considerable thickness. In places stiff clay, but generally sandy and dry in the upper part, with clay under-lying at greater or less depth. The contour offers good natural drainage to the Severn, which owing to its devious course, flows over a length of some eight miles either through or along the borders of the district."

"The climate of Shrewsbury is mild and possesses the characteristics of a valley climate. The open nature of the valley and the varied contours of the town, together with the course and movement of the Severn through and around the town, prevent stagnation of the air ; and river fogs, even in the low lying parts of the town, are neither so frequent nor so common as might be expected."

"The old town of Shrewsbury stands on two hills of generally moderate ascent, but steep in parts. It is nearly surrounded by the river, which here makes a horse-shoe curve some two miles round with a width across the neck of about 400 yards."

"The enclosed part is most densely built on. Of the various suburbs across the river, Frankwell forms an old settlement on the North-West with modern extensions chiefly of villa residences, along the main roads radiating from it ; Kingsland is a modern residential suburb to the South-West ; Coleham an old settlement to the South-East, with Belle Vue, a modern extension adjoining ; Abbey Foregate, old near the river, modern and residential further out, lies to the East."

"To the North-East, on the low lying ground outside the neck of the peninsula is the considerable district of Castle Fields, built over for the most part some fifty or sixty years ago, and forming an artisan residential quarter."

Rainfall.—The rainfall for the year, records of which have been kindly supplied by Dr. Gepp, was 26.47 inches, which is less by 1.55 than in the previous year, when the rainfall was 28.02 inches.

The following table indicates the fall in each month, with the number of days on which 1/100th of an inch of rain fell, the greatest rainfall on any day, and the date of the highest daily rainfall in each month :—

	Total fall.	No. of days .01 of rain.	Greatest fall.	Date of greatest fall.
January ...	3.10	14	.64	11th
February ...	.93	10	.34	9th
March	3.71	18	.76	22nd
April	3.21	18	.53	15th
May	2.19	18	.54	3rd
June	1.12	8	.28	5th
July	1.19	10	.47	6th
August	2.39	7	.87	22nd
September ...	1.72	13	.53	22nd
October	3.64	15	1.20	5th
November ...	2.05	15	.34	13th
December ...	1.22	11	.42	4th
Total ...	26.47	157		

Below is recorded the yearly rainfall for the past six years :—

1908	24.46 inches.
1909	23.03 ,,
1910	25.98 ,,
1911	17.37 ,,
1912	28.02 ,,
1913	26.47 ,,

(2).—Population.

The population of the Borough for the middle of 1913, estimated by the Registrar-General's method, was 29,627, an increase of 106 over the previous year. The natural increase in population which is the difference between the number of births and deaths is 224, a figure which is much in excess of the rate of increase of population. Migration is the chief factor in reducing the rate of increase. In 1911 the census showed the population to be 29,389, this figure indicating that the population had increased during the decennium 1901-1911 at a slow rate.

The following Census figures show the increase in population in successive decades :—

Year.	Population.	Increase.
1841	18,285	—
1861	22,025	3740
1871	23,406	1381
1881	26,478	3072
1891	26,967	489
1901	28,395	1428
1911	29,389	994

The following table from the Census Report for 1911 indicates the distribution of the population in the Wards in the Borough :—

Ward.	Families or Separate Occupiers.	Males.	Females.
Abbey	1158	2200	2664
Belle Vue	826	1659	1913
Castle	282	577	805
Castle Fields ...	871	1946	1982
Coton Hill ...	738	1426	1775
Ditherington ...	579	1282	1232
Kingsland and Coleham... ...	459	953	1186
Quarry	453	1041	1148
Stone	395	735	1019
Welsh	851	1959	1887

The area of the Borough, excluding water, extends to 3,470 acres, and the density of the population, or the number of persons living in the district per acre of land, is 8.5. This figure scarcely expresses the condition of things, as some of the Wards have large tracts of open land unbuilt upon, while others have houses crowded together with little open space and little circulation of air.

A better idea of the density of the population is obtained from the following table, in which the acreage, the population at last census, and the density of population in four geographical combinations of Wards are indicated :—

District.	I.	II.	III.	IV.
Wards.	Quarry, Stone, and Castle.	Welsh	Abbey, Belle Vue, Kingsland & Coleham.	Coton Hill, Castle F'ds, & Ditherington.
Acres	164	381	2151	774
Population ...	5,325	3,846	10,575	9,643
Persons per acre ...	32.4	10.9	4.9	12.4

Even these figures scarcely indicate the true condition of things except, perhaps, with regard to the first District, since in the Welsh Ward, in the Abbey and Coleham Wards, and in the Castle Fields Ward there are areas which might be called slum areas where the houses are built thickly on the land.

The number of families or separate occupiers in the Borough amounts to 6,612, which gives an average of 4.4 persons per house, according to the Census population for 1911.

Shrewsbury is a market and industrial town. It is the natural centre of the trade of a large agricultural district, a large number of main roads converging in the town, besides being an important railway centre. Industrial works are neither large nor numerous. There are large maltings, three breweries, a tan-yard, an agricultural implement factory, an iron foundry, a tobacco and cigar factory, gas works and electric light works. The tobacco factory is the only one which offers employment for females, and these are mostly girls and unmarried women. Employment for married women is practically non-existent in the Borough.

Poor-Law Relief and other forms of Relief.—The amount of outdoor relief given in the Shrewsbury district during the year was £386 15s. 8d.

Medical and surgical treatment is provided at the Salop Infirmary and at the Shropshire Eye, Ear and Throat Hospital. At the Salop Infirmary 285 in-patients and 450 out-patients from the Borough were dealt with during the year 1st July, 1912, to 30th June, 1913. These institutions appear to administer well to the needs of the poorer classes in the Borough as well as in the County generally.

A branch of the Victoria District Nursing Association is active in providing skilled nursing for poor people. Three nurses are employed, and during the year they attended 188 medical cases, 88 surgical cases, and 86 maternity cases.

The Shrewsbury Dispensary is an institution which is supported by voluntary subscription, and provides medical attendance for the families of the working classes at a low rate of contribution.

Only the very poorest, who cannot contribute to the Dispensary can be without skilled medical advice, and those who are so poor can receive attention at the Infirmary.

The Shrewsbury Branch of the Charity Organisation Society is actively engaged in administering charity in the Borough. During the year 1913, 200 applications for help were dealt with. Of these applications, 22 were withdrawn, 32 were referred to Poor Law and other agencies, and 146 were assisted directly by the Society. The assistance provided included convalescent aid, hospital treatment, surgical operations, etc.

B.—SANITARY CIRCUMSTANCES OF THE DISTRICT.

Water Supply.

A complete description of the water supply of the Borough was given in the Annual Report for the year 1910. The sources of supply are two in number, the first or drinking water being supplied by means of stand-pipes in the street and the other, for sanitary purposes, being laid on to houses.

The well-water, which is very hard, having just over twenty degrees of hardness, is obtained three miles from the centre of the town, and is of great chemical and bacteriological purity. As to the amount of water which can be procured from this well, no definite calculations have been made, but it appears certain that the amount produced would not be sufficient for all purposes, hence this supply is not put into houses.

The second supply is obtained from the river, whence it is pumped through Pressure Filters to a supply reservoir, which supplies the town. The filters clarify the water, and, as shown by previous experiments, take out a large proportion of the bacteria. There being no storage and the whole of the organisms not being filtered out of the water the result is not a potable water, but one which is eminently suitable for washing and sanitary purposes. To avoid danger of disease should this water be drunk accidentally—but it must be remarked that discouragement against drinking it is always given—it is treated after filtration by one part in 2,000,000 of chlorine in the form of " Chloros," which kills off any dangerous organisms which may be present. Repeated examinations have shown the absence of intestinal organisms in one litre of water.

Without going into the merits or demerits of such a system, it may be asserted that the supply as it is, and as long as it is kept under supervision, is a safe supply.

Rivers and Streams.

Particular attention is devoted to the question of pollution of the Severn and of its two tributary streams, the Rea Brook and Bagley Brook. Several sources of pollution of the main stream were found during the year and dealt with. During the summer months pollution by means of oil was found to be taking place, an iridescent film of oil being found on the surface of the stream on certain days of the week. It was found that there were two sources of the pollution, the one from an iron foundry on the banks of the river, and another from works which by an accident discharged waste oil into an old culvert. Both of these sources of pollution were remedied, the former by having the waste oil directed into the sewer, and the latter by having the connexion with the old culvert built up.

Pollution of the river by means of saw-dust from a saw-mill was also detected and stopped.

Sewage pollution was found at two points, the one source being from an old drain which conducted the sewage from two water closets into the river, the discharge pipe entering the river at a great depth and thus being invisible under ordinary circumstances, and the other from six large residential houses at Canonbury where the drains had never been connected with the sewer when it was constructed there, but were led to the river, which they entered at a depth which rendered them invisible. It was only by accident that the pollution was detected. In the former case new water closets have been built, and the drain connected with the sewer, the old w.c.'s which could not be connected with the sewer, being demolished. As regards the latter, a great source of pollution, representations are being made to the owners with a view to their having the drains connected with the sewer.

The washings from two breweries are also about to be diverted from the river into the Corporation sewer.

Drainage and Sewerage.

House-to-house inspection during the last four years under the Housing Acts has shown the very defective condition of the drains of most of the working-class dwellings in the town. Many of them appear to have been constructed with a reckless disregard of sanitary requirements, and in the absence of supervision. As a result of house-to-house surveying 462 houses were found to have defective drains. Of these, 113 have been re-drained, while the drains in connexion with 311 are either in course of construction or the reconstruction has been promised. The number of houses re-drained in 1913 as a result of notices served in 1912 was 297. Hence 410 houses have been completely re-drained in 1913 under the supervision of and tested by the Inspectors. These figures do not embrace repairs to drains, but apply to complete reconstructions.

On every hand one is troubled with that constantly recurring legal question of " sewer versus drain," which increases the difficulty of reconstruction of the drains, and causes delay in the execution of the work. This difficulty, it would seem, is largely due to the manner in which in previous years drains were joined up with others in their vicinity without any attempt at supervision.

The whole Borough is provided with sewers, except two small areas on which stand 7 and 15 houses respectively. Both groups of houses are so situated that sewers could not be laid without provision being made for pumping the sewage to a higher level.

These houses have dry earth-closets, and the slop water is run into cesspits which are constructed in the gardens. As the houses are situated in the open country, away from the crowded centre of the town, and as they have large gardens attached, the need for sewers is not an urgent one.

Sewage Disposal Works.—No change has taken place in the treatment of the sewage at the outfall works. There has, however, been a greater demand for sludge cake, and the already overburdened land has been saved from the sludging which in previous years has been rendering it less efficient as a purifier. As the land every year is becoming heavier and less suitable for agricultural purposes and also less efficient as a filtering medium, every effort should be taken to preserve its efficiency by making press cake and so saving the land. Moreover, the nuisance from smell attendant on sludging the fields is avoided when the sludge is made into press cake.

Closet Accommodation.

Except in the two areas already mentioned, Mount Pleasant and Underdale Road, the Borough is completely supplied with water closets. There are no privies and no privy-middens. These two areas, consisting of 7 and 15 houses respectively, have dry earth-closets, which are emptied in the large gardens which are attached to the houses, which, being in sparsely populated districts, do not thereby suffer from nuisance. As regards construction, the closets generally are of the wash-down type composed of two pieces, the pan and trap being separate, and usually with woodwork surrounding the pan. Whenever these pans have been found to be defective they have been replaced by pedestal w.c.'s without surrounding woodwork.

Generally speaking, among working-class houses, one closet is provided for each two houses, but in many cases one closet exists for each house. When more than two houses use one closet another is required, the rule being adopted of allowing not more than two houses to one closet.

Scavenging.

In previous reports the Council was urged to adopt better methods of scavenging and disposal of house refuse and to adopt a more expeditious method of securing the provision of proper covered receptacles by the owners or occupiers.

As regards the provision of proper covered receptacles, action has been taken under Section 36 of the Public Health Act, 1875, but it is to be hoped that there will be inserted in the new Building Byelaws, about to be made, sections dealing with the provision of proper dust-bins both for new and for old buildings. During the year notices were served on the owners with respect to the provision of proper refuse receptacles for 406 houses inspected in the house-to-house survey, and for 245 other houses. Of these, 219 were supplied with dustbins before the end of the year, and 388 have been promised. Seven insanitary ashpits were abolished during the year.

Ten stables were found to have no proper manure receptacles and were served with notices, 8 of which have been complied with. Undertakings have been given with regard to the other two.

The collection of refuse calls for much improvement, properly covered refuse carts being necessary. Although an attempt has been made to minimise the nuisance from uncovered carts by the provision of canvas covers, these covers are not used until the carts are full and on their way to be emptied, any gust of wind in the meantime blowing the dust off the carts on to the road or into the eyes of a chance passer-by. Further, the occupiers and also the scavengers should be forbidden to empty refuse on the roadways before collecting, a practice which, while being extremely unsightly, often results in the dust being blown about and consequent danger of spread of disease.

The tips, of which there are three in number, although well managed, are a constant source of nuisance and should not be allowed by the Council to exist much longer. It is well nigh impossible to prevent nuisance from smell and from flies from these, and at the present time, when ample evidence of the mischief done by flies has been brought forward, their existence should not be tolerated. To have such extensive breeding grounds for flies in the centre of inhabited areas is to cultivate potent means for the spread of disease. The erection of a destructor is not only urgently required, but it is a pressing duty of the Council.

Sanitary Inspections of the District.

The following table gives in summary form the work done by the Inspectors during the year and the total work done is evidence of their continued activity.

One prosecution under Section 41 of the Public Health Act, 1875, raised the old and troubled question of " drain versus sewer." The Court found that the pipe in question was defective, but that up to a certain point it was a drain and for the remainder of its extent a sewer. This case is only one of an enormous number, which show in what a chaotic state the law is in with regard to the question of sewer and drain, and which point to the urgency of having new legislation to prevent expenditure of money on litigation.

The other prosecution was taken under the Regulations under the Dairies, Cowsheds, and Milkshops Orders, and resulted in the offender being fined 10/-, including costs.

Summary.

Number of visits which have been paid during the year, either in connexion with outbreaks of Infectious Disease, or in consequence of complaints, or in the course of a systematic survey	4,882
Number of Houses inspected in the course of House to House Survey	421
Number of houses disinfected	215
Number of legal notices served	22
Number of informal notices served	525
Number of such notices complied with	375
Number of letters written	469
Number of complaints received and dealt with ...	320

Dairies, Cowsheds and Milkshops.

(*a*)	Number of Cowkeepers and Milksellers on Register ...	35
(*b*)	Number of inspections	102
(*c*)	Number of notices, verbal or written	11
(*d*)	Number of notices complied with	7
(*e*)	Proceedings before Magistrates	1

Particulars of Sanitary Defects referred to in the above Notices.

(*a*)	Deficient or objectionable water supply	—
(*b*)	New drains to be constructed or old drains to be amended, Houses affected	462
(*c*)	New closets to be provided or old ones to be amended in construction	70
(*d*)	Defective paving, etc. Houses affected	434
(*e*)	Inadequate means for lighting and ventilation ...	188
(*f*)	Houses damp or dirty, or admitting rain, or weather, or otherwise in a bad sanitary condition ...	449
(*g*)	Offensive accumulations of all kinds	38
(*h*)	Animals so kept as to be a nuisance	19
(*k*)	Houses overcrowded	46
(*l*)	Houses to be cleansed after infectious disease ...	11
(*m*)	No proper receptacles for refuse	651
(*n*)	Proceedings before Magistrates	3

Premises and Occupations which can be controlled by Byelaws or Regulations.

Common Lodging Houses.—The attention of the Council was drawn in previous annual reports to the somewhat anomalous manner in which the Byelaws relating to these premises are enforced. It was pointed out that the Chief Constable and not the Inspector of Nuisances was the Inspector appointed to enforce the Regulations, and suggestions were made for the alteration of this arrangement by appointing the Inspector of Nuisances as the Inspector dealing with these places. The power of the Police to visit these houses would still be preserved. So far most of the work of improving the Common Lodging Houses in the Borough has fallen on the Public Health Department, as it really ought to do, but recourse had to be had to unusual methods. For example, two of the houses were represented for closure under Section 17 of the Housing, Town

Planning, etc., Act, 1909, and then, and only then, did the owners attempt to put the premises into a sanitary condition.

At the beginning of the year there were five common lodging houses, but one has been discontinued. The other four houses are now in good sanitary condition, and appear to be well conducted. Although the Inspector of Nuisances is not the executive officer, frequent visits are made to see that the premises are kept in a good sanitary condition.

HOUSES LET IN LODGINGS.—In the Annual Reports for 1910, 1911 and 1912, the attention of the Council was drawn to the necessity of making byelaws with a view to the control of certain houses which to all intents and purposes are common lodging houses except that the lodgers pay for their lodgings at so much per week instead of per night. One can never be sure that they do not take nightly lodgers.

By Section 90 of the Public Health Act, 1875, and Section 8 of the Housing of the Working Classes Act, 1890, the Council is empowered to make Byelaws for the following purposes :—

" (1) For fixing and from time to time varying the number of persons who may occupy a house or part of a house which is let in lodgings or occupied by members of more than one family, and for the separation of sexes in a house so let or occupied :

" (2) For the registration of houses so let or occupied :

" (3) For the inspection of such houses :

" (4) For enforcing drainage and the provision of privy accommodation for such houses, and for promoting cleanliness and ventilation in such houses ;

" (5) For the cleansing and lime-washing at stated times of the premises, and for the paving of the courts and courtyards thereof :

" (6) For the giving of notices and the taking of precautions in case of infectious disease :

It seems desirable, not only from a sanitary standpoint, but from the view of police administration, that byelaws should be made with respect to these premises, which are usually inhabited by persons of a low character. Were byelaws made the police would secure the same right of entry as they have with regard to common lodging houses.

OFFENSIVE TRADES.—Five places in which offensive trades are conducted are registered in the Borough. In two tallow melting is carried on, in one fell-mongering, in one tripe-boiling, and in one tripe boiling and gut scraping. All of these places were visited regularly throughout the year, 143 visits in all being made to them. Notices were served in two instances, both being complied with promptly. The larger of the two tallow melting premises was the cause of several complaints during the year by aggrieved persons. Some substantial alterations are necessary to prevent nuisance, and attention is being at present devoted to it with a view to proper remedial measures being adopted.

Steps were taken by the Council during the year to have certain trades declared by Order as offensive under Section 112 of the Public Health Act, 1875, as amended by Section 51 of the Public Health Acts Amendment Act, 1907, resulting in an Order being issued by the Local Government Board dated the 8th November, 1913. The Order declares the trades, businesses or manufactures of a Blood-drier, a Tanner, a Leather-dresser, a Fat-melter or Fat-extractor, a Glue-maker, a Size-maker, a Gut-scraper, a Fish-frier, a Dealer in Rags and Bones, and a Manufacturer of Manure (other than Chemical manure) to be offensive trades in addition to those specified as offensive under Section 112 of the Public Health Act, 1875, namely, Blood-boiler, Bone-boiler, Fellmonger, Soap-boiler, Tallow-melter or Tripe-boiler.

By virtue of this Order and Section 112 of the Public Health Act as amended by Section 51 of the Public Health Acts Amendment Act, 1907, no person can establish within the district any of the specified offensive trades without the consent in writing of the Local Authority. This Order includes fried-fish shops, which are a great source of nuisance and which have often been transferred from one part of the town to another without interruption and without consideration for those living in the immediate vicinity.

Canal Boats Acts.—There are no canal boats registered in the district, and the canal traffic is small. The number of boats inspected during the year was 27, and with three exceptions the boats were found to be in accordance with the Acts and Regulations. One boat was found to have one child more than allowed, and two were found to require repainting, which repainting was done by the owners on receipt of notice. No cases of infectious disease were found and no boats were detained for cleansing and disinfection.

FOOD.

(a).—Milk Supply.

At the beginning of the year there were 35 cowkeepers and milksellers registered in the Borough and classified, as regards premises, into 19 cowsheds where cows were kept as well as milk sold, and 16 milkshops or places where milk was only retailed. During the year, however, three of the cowsheds were given up on account of serious sanitary defects, one after prosecution under the Regulations made under the Dairies, Cowsheds and Milkshops Orders. The prosecution was for failing to provide proper light and ventilation and to keep the premises in a cleanly condition. A penalty of 10/- including costs was imposed, and as the cowkeeper could not get the cowshed into proper condition without rebuilding he chose to give up keeping cows.

The cowsheds and milkshops were visited regularly throughout the year, and particular attention was paid to milkshops to secure as far as possible cleanliness in handling the milk.

Eleven notices were served on cowkeepers during the year with respect to their premises, seven of these being complied with before the end of the year Two cowsheds require to be completely overhauled, and pressure is being brought to bear on the occupiers to have the improvements carried out.

Further powers are required for dealing with premises in which milk is retailed and yearly licensing is highly desirable. The long promised Milk Bill appears as far off the Statute Book as ever in spite of the fact that striking evidence of the need for further legislation for the control of the milk supply has been repeatedly brought forward.

Tuberculous Milk.—During the year 13 samples of milk were taken for examination for the presence of tubercle bacilli. One of the samples examined was found to contain tubercle bacilli. Information was given to the County Medical Officer with respect to this milk which came from outside the district. The Veterinary Inspector for the County thereupon was instructed to examine the cows, but no affected animal was found. It is probable that during the three weeks which elapsed between the taking of the sample and the ascertainment of the bacteriological result the affected cow had been got rid of. The cowkeeper asserted that several cows had been sold since the date of sampling. A supply of milk taken from the same supply later gave a negative result. The great disadvantage in dealing with tuberculous milk is that the examination cannot be completed before the expiration of three weeks, and in the meantime the offending cow may have been got rid of.

Dirt in Milk.—All the thirteen samples of milk were also examined for dirt by the sedimentation process, and one out of the thirteen showed an excess of dirt. A letter of warning was sent to the retailer and information as to the source of the milk was forwarded to the County Medical Officer who had a sample taken and examined, but the warning given to the retailer had acted beneficially, for the second sample was found to be satisfactory. Attention has been devoted to the question of dirt in milk for the last four years, and the retailers in the Borough are aware of the necessity of handling the milk with care, and of bringing pressure to bear on the wholesale dealers and producers for them to do likewise.

(b)—Other Foods.

The abattoir superintendent, Mr. Farrell, who possesses the Certificate of the Royal Sanitary Institute as Inspector of Meat, was appointed Inspector of Meat under Section 169 of the Public Health Act, 1875, with which is incorporated Section 131 of the Towns Improvement Clauses Act, 1847. In this position he acts as a member of the public health staff, and in addition to inspecting the meat in the public abattoir, visits the private slaughterhouses for the purpose of meat inspection. He also makes visits to butchers' shops and to the Market Hall once a week, on Saturdays, when meat is exposed for sale.

As regards other foods the Inspector of Nuisances and the Assistant Inspector make frequent inspections of places where they are sold or prepared.

Public Abattoir.—There can be no question of the value of a public abattoir in securing the proper inspection of meat prepared for human food. If evidence of its value is necessary it may be found in the amount of diseased meat which has been surrendered in the abattoir and destroyed each year since its opening in April, 1911.

During the year ending December 31st, 1913, there were slaughtered in the public abattoir 1,332 beasts. Of these, 14 were found more or less affected with tuberculosis. The diseased parts were surrendered to the superintendent and destroyed as follows:—

1. Cow.—Lungs and mesenteric glands affected, liver slightly. These parts were destroyed, and the remainder passed.
2. Heifer.—The whole of the pleura and peritoneum with the corresponding lymphatic glands were affected, and also the lungs, liver and kidneys. The whole was destroyed.
3. Cow.—There were primary deposits in the lungs and bronchial glands. The lungs were destroyed and the remainder passed.
4. Cow.—Both lungs were affected. The pleura and peritoneum were affected and the lymphatic glands were inflamed. The whole was destroyed.
5. Cow.—Tuberculous nodules were found in the lungs and mesenteric glands, and a few in the liver. These parts were destroyed and the rest passed.
6. Heifer. Acute inflammation of pleura and peritoneum was found. The lungs, liver, spleen and kidneys were affected. The whole was destroyed.
7. Heifer. The lungs, liver, pleura, peritoneum and the deep seated lymphatic glands were affected. The whole was destroyed.
8. Cow.—The pharyngeal and prescapular glands were affected, as well as the lungs, pleura and peritoneum, liver and mesentery. The whole carcase was destroyed.
9. Cow.—The lungs, pleura, peritoneum, kidneys and mesentery were affected, along with the lymphatic glands. The whole was destroyed.
10. Cow.—Chronic nodules were found in the lungs and mesenteric glands and one nodule in the liver. These parts were destroyed, and the rest passed.
11. Cow.—The lungs showed primary nodules. The lungs were destroyed and the rest passed.

12. Heifer.—Acute inflammation was found on the pleura and peritoneum. Both lungs and kidneys were affected and the deep seated glands were all much inflamed. The whole carcase was destroyed.

13. Heifer. The lungs and liver were badly affected. The serous membranes of thorax and peritoneum were acutely inflamed. The whole carcase was destroyed.

14. Cow.—Primary tuberculosis of the lungs was found. The lungs were destroyed and the rest passed.

The following were also found to be diseased and dealt with :—

1. Bullock.—This animal had been suffering from uraemic poisoning, the urinary apparatus being the seat of marked inflammation and degeneration. There was also present peritonitis and pneumonia. The whole carcase was destroyed.

2. Bullock.—This animal was in a similar condition to the previous one. The whole carcase was destroyed.

3. Bullock.—The jaw bone and root of the tongue were found to be affected with actinomycosis. The head and tongue were destroyed.

In addition there were destroyed the lungs of six beasts and eight livers affected with hydatids, 13 livers affected with flukes, and 20 livers affected with abscesses.

The sheep and lambs slaughtered numbered 7,791, and of these five were found to be unfit for human food.

1. Wether.—Uraemic poisoning was found. The animal was slaughtered in a dying condition. The whole carcase was destroyed.

2. Wether. This was found to be badly affected with joint-ill. The whole carcase was destroyed.

3. Ewe.—This animal was slaughtered in a dying condition, and showed, when dressed, evidence of a feverish condition. The whole was destroyed.

4. Lamb.—Extensively affected with tapeworms. There was enteritis and evidence of a feverish condition. The whole carcase was destroyed.

5. Ewe.—This animal had been, it was said, smothered. The whole was destroyed. There were also destroyed the lungs of 25 sheep and 85 livers on account of parasitic affection.

There were also slaughtered 788 calves, of which six were destroyed as unfit for human food. Three had been badly affected with scour and were emaciated, one slaughtered in a dying condition was affected with pneumonia, and two were found to have been affected with joint-ill.

The number of pigs slaughtered during the year was 3,906, of which 85 were found to be more or less affected with tuberculosis. In the case of 30, apart from the usual primary foci, tuberculous deposits were found in the lungs, liver, spleen and deep seated lymphatic glands and in several cases the bony structure of the ribs and vertebrae was affected. The whole carcases of these were destroyed. As regards 21 the heads only were destroyed, as the submaxillary glands alone were affected, in other 20, only the stomachs were affected, these being destroyed and the rest of the carcase being passed ; while as regards the remaining 14, both stomachs and head were affected, and these parts only were destroyed.

One pig slaughtered was found to have swine erysipelas. The whole carcase was destroyed.

In addition to the above there were also destroyed the lungs of two pigs and eighteen livers affected with hydatids, 35 lungs and hearts, 21 livers and 3 kidneys on account of inflammation, and 90 lbs. of pork on account of its being badly bruised.

Private Slaughterhouses.—There are now only five private slaughterhouses in the Borough, and these are well conducted, but their position in widely separated parts of the town entails a considerable amount of time for their proper supervision and the inspection of the meat dressed there. It is not only necessary from the consumers' point of view, but fair to the other butchers slaughtering in the public abattoir that these places should be visited frequently. During the year Mr. Farrell paid 344 visits to private slaughterhouses. He estimates that there were slaughtered 600 beasts, 4,600 sheep and lambs, 300 calves, and 300 pigs. In the private slaughterhouses the carcases of two cows, extensively affected with tuberculosis, were surrendered and destroyed. One bullock showed primary lesions in the pharyngeal glands and lungs and slight affection of the chest wall, with the result that the head, lungs, and 148 lbs. of beef were surrendered and destroyed.

There were also destroyed 3 beasts' lungs affected with hydatids, 3 livers with abscesses, 9 sheep lungs with thread worms, 17 livers affected with flukes, 2 pigs' livers affected with hydatids, and one set of beast's intestines affected with parasitic nodules.

General Market, etc.—The General Market was visited every Saturday, when the meat stalls are occupied, and visits were paid to each butcher's shop in the Borough every week. There was no occasion for any action at the meat stalls in the market or in the butchers' shops.

In the market the carcases of a number of rabbits were found to have the livers affected with coccidiosis. The livers of these were destroyed. Two chickens found to be in an early stage of putrefaction were surrendered and destroyed. There were also surrendered for destruction 6 lbs. of decomposed tongues from one restaurant and 39 lbs. of decomposing ham from another. There were also found by the Inspector and destroyed 100 stale herrings.

Administrative action taken with regard to tuberculous animals.—When a tuberculous animal is found at the abattoir careful enquiries are made as to the original home of the animal. In a few cases the enquiries have been successful, and particulars of the orginal owner have been forwarded by the abattoir superintendent to the Medical Officer of Health, who has sent the information to the County Medical Officer if the animal has come from within the County. The County Medical Officer has caused an inspection to be made by the Veterinary Inspector in all cases and has been able in this way to put into operation the Tuberculosis Order. It is only in a few cases that particulars of the source of the animal can be obtained as either the butcher is disinclined to make trouble with the farmer or the identity of the animal is apt to be lost in passing through the market, which it often does several times before reaching the butcher. The object of the enquiries is to trace the actual origin of the disease and assist in its control at its place of origin.

Methods of Slaughter.—The abattoir superintendent has taken a deep interest in humane slaughtering, and by patience and practical demonstrations he has been able to get the butchers to discard almost entirely their old methods of slaughtering, which have often been the cause of much unnecessary suffering to the animals. Humane slaughtering not only has lessened the suffering inflicted on the animals, but has lessened, and, one may say, reduced to a minimum the noise, especially from pigs, one is accustomed to in an abattoir. Mr. Farrell has furnished a report on humane slaughtering which might well be quoted *in extenso* as the account of his experience may be of great value to others in giving them guidance as to the best instruments and in furnishing to objectors evidence of their efficacy.

"In the Byelaws made by the Sanitary Committee under Sec. 169 of the Public Health Act, 1875, to regulate the use of the public abattoir, number 18 states, 'That no person shall in a slaughterhouse proceed to slaughter any bull, ox, cow, heifer, calf, or pig until the same shall be effectually stunned.' (Jewish slaughtermen excepted).

"This Byelaw tended rather to bring about more unintentional cruelty in the process of pig slaughtering by the use of the ordinary pig hammer than it eliminated, on account of the swinging blow very frequently missing the extremely small area of brain presented for an effectual blow.

"In December, 1911, humane slaughtering was introduced by the use of the captive-bolt pistol for pig stunning. The method very soon gained favour and is now in general and permanent use, and is carried out by the whole of the slaughtermen themselves. From that date until the year ending December 31st, 1913, 7,858 pigs have been slaughtered by humane methods.

"During that period the number of failures with the pistol have been almost negligible, and have been mostly due to faulty ammunition..

"The use of the pistol does not in any way produce any harmful effects on the carcase either in its bleeding during slaughter or in its keeping properties after.

"Humane slaughtering was introduced for beasts by the use of a captive bolt pistol in April, 1913. The captive bolt pistol used for ox stunning is fixed at right angles to a shalt, 4 feet 6 inches long, up the centre of which is fixed the wire that actuates the trigger, so that the operator does not stand in front of the beast while using the instrument.

"This method of stunning the beasts soon received the approval of the butchers, and the old method of the pole-axe has now fallen into disuse. Since the date the pistol was introduced 1,000 beasts have been slaughtered by it. So successful has been the use of the captive-bolt pistol for the stunning of large animals that a failure with it occasions great surprise to the butcher, and failures are very rare, and are only caused by faulty cartridges or want of cleansing of the bolt. Many bulls figured amongst the large animals slaughtered of various ages and weight, the largest being a four-year-old Hereford bull, of 1,060 lbs. dressed weight.

" During the past year sheep stunning has been practiced to some extent, and some hundreds of sheep have been successfully and instantaneously stunned by means of a hollow steel striker actuated by a powerful spring, both being contained in an elongated steel tube. Sheep stunning has not yet become general, through our not having an instrument thoroughly applicable for the purpose, but we shall have achieved success in this respect within the next few weeks with an improved instrument. In the whole of the humane slaughtering practised here the use of a loose bullet is completely eliminated, thereby reducing personal risk to the user to a minimum.

" Sheep stunning is, from the humane point of view, quite as necessary as the stunning of cattle, and more so than the stunning of pigs, as the process of pithing after sticking is slow on account of the depth of the atlas joint. In most cases the pithing is imperfectly done, the sheep being still conscious. The time taken to half pith is wasted, and a great amount of useless pain inflicted on the animal. A pig, on the other hand, after sticking is not subjected to a probing through the vertibrae, but simply bleeds to death.

" Humane slaughtering is practised in two out of the five private slaughterhouses in the Borough, and also, as a result of demonstrations, in several slaughterhouses situated outside the Borough.

" For pig-killing for private use on private estates and on many farms surrounding the district many requests have been made for the use of humane instruments, showing how popular this method of slaughtering has become."

(c)—Sale of Food and Drugs Acts.

During the year there were taken for analysis, 71 "formal" and 14 "informal" samples. These are tabulated below:—

FORMAL SAMPLES:

Nature of Sample.	Number of Samples taken.	Number found adulterated.	Proceedings taken.
Milk	34	2	—
Butter	23	—	—
Brandy ...	3	—	—
Pepper	2	—	—
Whisky ...	2	—	—
Cheese	3	—	—
Lard	3	—	—
Rice	1	—	—

INFORMAL SAMPLES:

Nature of Sample.	Number of Samples taken	Number found adulterated.
Milk	7	1
Butter	6	—
Brandy ...	1	—

"Informal" samples are those which are taken without the special procedure required in sampling under the Sale of Food and Drugs Acts. A sample can be taken without the seller being in the least aware that it is bought for analysis, and should the sample taken in the informal way prove to be adulterated the inspector can adopt special precautions and get a sample in a formal manner without the seller being aware of the purpose of the purchase until the inspector informs him. The practice of "informal" sampling is excellent for determining if the "formal" sampling is effectual in detecting adulteration.

The results of the chemical analysis of the various samples of milk are tabulated hereunder :—

FORMAL SAMPLES :

No.	Solids Non-fat.	Fat.	Total Solids
432	8.84	3.65	12.49
433	9.15	3.95	13.10
434	8.99	3.90	12.89
435	8.81	3.70	12.51
436	9.10	3.70	12.80
443	8.89	3.50	12.39
444	**7.75**	**10.40**	18.15
446	8.79	3.70	12.49
447	8.84	3.55	12.39
451	9.22	4.50	13.72
452	9.37	3.30	12.67
454	9.08	3.70	12.78
455	9.09	3.80	12.89
456	9.08	3.70	12.78
457	8.75	3.50	12.25
458	8.88	3.20	12.08
459	8.79	3.90	12.69
460	9.00	3.60	12.60
461	9.23	4.75	13.98
462	9.48	4.00	13.48
463	8.90	3.35	12.25
473	9.02	5.50	14.52
474	8.91	4.30	13.21
475	8.81	3.30	12.11
482	8.90	4.50	13.40
483	8.84	3.05	11.89
484	9.10	4.60	13.70
485	9.11	3.90	13.01
497	**7.90**	3.30	**11.20**
498	9.19	3.85	13.04
499	9.16	4.05	13.21
500	9.20	4.10	13.30
4	9.11	3.70	12.81
5	**7.50**	3.2	**10.70**
Average	8.90	4.0	12.90

INFORMAL SAMPLES :

No.	Solids Non-fat.	Fat.	Total Solids.
453	9.25	4.50	13.75
468	8.98	3.70	12.68
469	9.17	3.40	12.57
470	9.01	3.40	12.41
471	9.19	3.40	12.59
472	8.97	2.30	11.27
476	8.88	3.60	12.48
Average	9.06	3.50	12.54

The following table gives particulars regarding the samples found not genuine, the proceedings taken and the result :—

Name of Article.	Number of Sample.	Result of Analysis.	Proceedings taken and Results.	Remarks.
Milk	472	20% deficient in fat	Proceedings not taken	Informal sample
Milk	497	7% added water	,,	Seller cautioned
Milk	5	11% added water	,,	The Sanitary Committee after having heard the seller decided that no action should be taken.

Sample **444** was an unusual one, and was probably due to improper mixing of the milk in the can before sampling. As regards No. **472**, which was found to be 20% deficient in fat, no action was taken, on account of its being an informal sample. Another sample was taken in a formal manner from the same retailer, and this was found to be genuine. The second sample in the above table, No. **497**,showed the addition of 7% of water, although the fat was above normal. After considering the general circumstances a caution was given to the seller. With respect to sample No. 5 little need be said beyond what is indicated in the table. The seller came before the Sanitary Committee and stated that if the milk was tampered with it was done by his servants in a fraudulent manner and for their own gain and not for his advantage. The Committee, considering the circumstances and the character of the seller, who, though he owns the business, has of necessity to leave the management to servants, decided not to prosecute.

(d)—Milk and Cream Regulations, 1912.

The following is a copy of the Report on the administration of the Public Health (Milk and Cream) Regulations for the year :—

1.—Milk and Cream not sold as Preserved Cream.

	Number of samples examined for the presence of preservatives.	Number in which a preservative was reported to be present.
Milk	41	None
Cream	None	None

2.—Cream Sold as Preserved Cream.—No samples taken.

3.—Thickening Substances.—No samples taken.

Remarks.—Mr. C. S. Herd, the Inspector under the Sale of Food and Drugs Acts, died on the 28th day of April, and it was the 1st September before the new Inspector, Mr. W. C. Heas, took up his duties. Mr. Heas, who is also Inspector of Weights and Measures, unfortunately had great arrears of work to cope with, and no samples of cream were taken for analysis. During the present year particular attention will be devoted to the sampling of cream under the Regulations.

HOUSING.

The proper housing of the working classes in the Borough, as in other places, remains an unsolved problem. Attention has been called in previous reports to the urgent need of providing more houses and of improving the standard of the existing ones. Encouraging progress has been made in both directions.

The Council's scheme for the erection of 63 houses in the Ditherington Ward having been sanctioned by the Local Government Board, no time was lost by the Council in completing their arrangements and getting the work in hand. Unfortunately, serious delay has occurred owing to the death of the builder to whom the contract was given. Arrangements are being made by which it is hoped to secure the early completion of the houses which are so urgently required.

The continued scarcity of houses has prevented the closure of any in 1913. Though 5 were represented for closure, their consideration was adjourned pending the owner submitting a scheme for putting the houses in order. Closing Orders made in 1912 with respect to 6 houses were withdrawn in 1913, the houses having been put into a proper sanitary condition. Three houses closed in 1912 were demolished during the year under consideration. Seven other houses were closed and demolished by the owners without closing orders being made. Thus, without closing orders being made, during the year there was a loss of seven houses.

Very great progress has been made during the year in the important work of improving the condition of the existing working-class houses. The Inspector appointed under the Housing Regulations, 1910, surveyed 421 houses, of which few were found to be without defects. Particulars of the defects found are given in the table below. The number of notices served with regard to these defects was 380. The total number of defects was 2,430.

It may be stated that usually owners and agents have given little avoidable trouble, and have done their best to comply with the notices. Difficulty has sometimes arisen over the vexed question of " Drain and Sewer," but no real difficulty has resulted when the owners have been willing to meet the authority in a reasonable way. Delay in getting necessary repairs carried out is often occasioned by owners in poor financial circumstances or trustees having allowed the property to get in a very bad state of repair, and not having sufficient funds to remedy the defects when called upon.

In addition to the work done under notices served in 1913 a considerable amount was carried out as a result of notices served in 1912.

Particulars of the defects found in the 421 houses surveyed during the year 1913 :—

Defective ventilation and lighting ...	186
Defective roofs, eaves gutters, etc. ...	160
Defective plastering, dirty walls and ceilings	218
Defective drains and w.c.'s or insufficient w.c.'s	333
Defective paving	398
Defective refuse receptacles	406
No scullery sinks	347
No proper food store	361
Accumulation of refuse	10
Animals improperly kept	11
Total defects ...	2430
Total notices served	380

Defective Ventilation and Lighting.—In 186 of the houses surveyed, inadequate provision for effectually lighting and ventilating the rooms was found. Many of these houses were of the back-to-back type, in which it is impossible to properly remedy the defects without making each pair of back-to-back houses into one house. This has been done in many cases, and although a loss in number of houses results, yet this is well compensated for by their more healthful condition and the more adequate accommodation provided for tenants with large families. A considerable number of houses not of the back-to-back type were found with windows too small in area to give proper lighting, or with windows not made to open.

Defective roofs, eaves gutters, etc., causing dampness of walls.—So many of the houses were built before the provision of a damp-proof course was insisted upon, that it is not surprising to find 160 houses out of 421 with damp walls. Neglect of roofs, walls, and eaves gutters was the usual cause of the more serious cases of dampness. Owners might with profit to themselves and comfort to their tenants take keener interest in maintaining good weather-proof roofs and walls, and sound eaves gutters and pipes. Any neglect in this respect means rapid deterioration of the building.

Defective plastering, dirty walls and ceilings.—Of the houses surveyed 218 were found in this inexcusable condition, the state of some being extremely bad. The blame for these defects lies often with the owners, who, regardless of the condition of these houses, take the rent and refuse any assistance to the tenants towards keeping the walls in a reasonable condition tending to cleanliness. But it is not always the owner who is at fault. Too often we meet with occupiers who appear to have no sense of cleanliness, and no matter how well the owner has done his part in cleansing the house, it quickly becomes as bad as ever. A clean tenant will to some extent make up for the deficiencies of his landlord, and an owner often preserves and prevents more serious nuisance arising from the dirty habits of an undesirable tenant, but when there is a combination of careless owner and dirty tenant, the result is a distinct menace to the health of the public.

In fairness to the owners generally, it may be pointed out that though the Local Authority has ample power for dealing with them, unfortunately no provision has been made for dealing with the tenants whose filthiness and carelessness often make our efforts to cleanse the houses in our courts and passages appear almost a hopeless task.

Defective drains, defective w.c.'s or insufficient number of w.c.'s.—Under this heading 333 houses were found with drains defective in construction, w.c.'s out of order, or one w.c. supplying more than two houses.

At present exception is taken to more than two families being alotted to one w.c., but it is highly desirable in order to preserve the ordinary decencies of living that one w.c. should be provided for each house. The necessity for the reconstruction of so many drains arises from the fact that the importance of having all drains constructed with water-tight cemented joints, and sufficient inspection chambers to give easy means of access in case of obstruction has only been recognised in the Borough during recent years. Practically all the old drains are bad, the clay or mortar being washed out of the joints and the pipes often having been broken to clear an obstruction and carelessly repaired. The result is that sewage has been allowed to escape into the ground about the houses for years. After seeing so many bad examples of this sort in congested districts one is surprised there have been no more serious consequences.

The reconstruction of the defective drainage is a very important part of the housing work and entails considerable amount of work for the Inspector in supervising and testing the new drains as the work proceeds. All new drains have to stand the water test before they are passed and the trenches allowed to be filled in.

Defective Paving.—Probably no improvement is more appreciated by the tenants than the paving of the yard which is thus rendered easily cleansable. A durable, impervious and cleansable paving formed to drain naturally to gulleys is demanded in all cases. In the paving of yards tar macadam is often used. When well laid on a solid foundation this makes a satisfactory paving at less cost than blue brick. Concrete slabs are coming into favour, and make an excellent paving, which has the advantage over blue bricks of having few joints and being less expensive.

Refuse Receptacles.—When only 15 houses out of 421 are found provided with a proper receptacle in which to deposit refuse, the need for action under this heading is apparent. Where sanitary dust-bins have been provided as a result of inspection, they are not always properly used. As in many other sanitary matters, a considerable amount of educative work remains to be done in order to convince certain people how important in their own interests it is, as well as in the interests of public health, to cultivate the virtue of cleanliness. The best way to dispose of refuse is to promptly burn it. Failing that, if care be taken to consign refuse to an impervious receptacle properly covered, there would be less encouragement for the undesirable visits of flies, whose responsibility for spreading infectious disease is now well recognised.

Scullery sinks.—Of the houses surveyed, 347 were found to be without scullery sinks. The Public Health Act (Amendment) Act, 1907, gives power to Local Sanitary Authorities to compel the provision of a sink. Where these have been provided a great improvement in the cleanliness of the houses and yards is noticeable, though in some cases the tenants still cling to their old dirty habit of throwing the slop water on to the yard.

Food Pantries.—A serious defect, generally found, is the want of a proper place in which to store food. No less than 361 houses were without any food pantry. No dwelling should be without a food larder, situated in a cool place, and lighted and ventilated direct from the external air. Usually the food is kept in a dark, ill-ventilated recess under the stairs, or on shelves in any odd corner, there subjected to contamination by flies, and rapidly decomposing for want of light and air.

Accumulations of refuse.—Only 10 accumulations of refuse were found in 1913, as compared with 30 in 1912. This result is due to the great amount of attention devoted to the inspection of courts and the collection of house refuse.

Animals improperly kept.—The keeping of poultry under dirty conditions accounts for the 11 defects under this head. Poultry kept in a corner of a small unpaved yard, or let roam at will without any attempt to keep the yard clean, gives rise to a filthy condition of the premises, and the roughly constructed pens usually provide a harbour for filth and vermin.

Accommodation and Rents.—The following table gives the number of houses having five rooms and under, with the number living in each group of houses.

ACCOMMODATION AND RENTS.

Number of houses.	Rooms.	Persons over 14.	Persons under 14.	Total persons.
1	1	1	—	1
37	2	70	58	128
265	3	630	490	1120
34	4	95	72	167
37	5	114	86	200

The above table shows that of 421 houses surveyed, 37 had two rooms and 265 had three rooms. The 37 two-roomed houses were occupied by 70 adults and 58 children under 14 years of age, and 265 three-roomed houses accommodated 630 adults and 490 children.

The houses found to be over-crowded were 46 in number. Most of the cases of over-crowding occurred in the three-roomed houses, which usually contain one bedroom about 12 feet by 10 feet, and one other only about 9 feet by 5 feet. When this very limited sleeping space is occupied by 2 adults and 8 children, or 3 adults and 7 children, or 3 adults and 8 children, or 4 adults and 4 children (these actual conditions having been found), the results are bound to be deplorable morally and physically. The greatest difficulty arises from the fact that in most cases these occupiers are not able to pay the rent of a house large enough to accommodate them properly. We have met with instances where a larger house has been taken and lodgers admitted to help to pay the increased rent, the last condition being worse than the first.

Many agents and owners will not let houses to tenants with young children, resulting in the tenants being hampered in their movements and prevented from securing a house suitable to their requirements.

In the following tables are set out the number of houses of 5 rooms and under with their respective rents :—

A 1 room	1	at	2/-			per week.

B 2 rooms	22	at	2/-	—	2/6	per week
	15	,,	2/6	—	3/6	per week

C 3 rooms.	115	at	2/-	—	3/-	per week
	142	,,	3/-	—	4/-	per week
	8	,,	4/-	—	6/-	per week

D 4 rooms	5	at	2/6	—	3/-	per week
	21	,,	3/-	—	4/-	per week
	8	,,	4/-	—	5/-	per week

E 5 rooms.	25	at	4/-	—	5/-	per week
	12	,,	5/-	—	6/6	per week

The rentals as indicated above may not appear generally to be very high, but when we take into consideration the very defective sanitary condition of these houses, as evidenced by the table showing the defects found, we are compelled to admit that the rents are very high.

Lighting of Courts.—A report on the housing work of last year would not be complete without a reference to the lighting of the courts, which was undertaken during that period.

Early in the year the Council considered the question of lighting the courts, with the result that the Lighting Committee took action in the matter. This Committee decided that all courts with not less than four houses therein should be provided with a sufficient light. The work is now nearly completed, with most satisfactory results, the much-needed improvement being highly appreciated by the tenants of the houses concerned.

Workshops, Workplaces, etc.

The following tables show the extent of the work done with respect to Factories and Workshops :—

1.—Inspection of Factories, Workshops and Workplaces, including inspection made by Inspector of Nuisances.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
FACTORIES (including Factory Laundries)	—	—	—
WORKSHOPS (including Workshop Laundries)	482	31	Nil.
WORKPLACES	—	—	—
Total .	482	31	Nil.

Bakehouses.—All the bakehouses are kept under close supervision with a view to securing cleanliness in management. Active steps were taken in 1911 to have all the bakehouses put into good condition, and since then a marked improvement has been noticeable in the cleanliness and care with which these places are managed.

Section 22 of the Public Health Act (Amendment) Act, 1890, has been adopted in the Borough. The standard of sufficiency and suitability enforced is that required by the Sanitary Accommodation Order, 1903, of one w.c. for every 25 persons employed, with separate provision for the sexes. Generally the provision is much in excess of this requirement.

2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS AND WORKPLACES :—

Particulars.	Number of Defects.			
	Found	Remedied	Referred to H.M. Inspector	Prosecutions. Number of
Nuisances under the Public Health Acts :—				
Want of Cleanliness	13	13	nil.	nil.
Want of Ventilation	2	2		
Overcrowding	1	1		
Want of Drainage of Floors	4	4		
Other Nuisances	3	2		
Sanitary Accommodation — insufficient ...	8	7		
Sanitary Accommodation — unsuitable or defective ...	3	3		
Sanitary Accommodation — not separate for sexes ...	1	1		
Offences under the Factory and Workshop Act :—				
Illegal occupation of underground Bakehouse (S. 101)				
Breach of Special Sanitary requirements for Bakehouses (S.S. 97—100)				
Other Offences				
Total ...	35	33	—	—

There was a slight decrease in the number of workshops in 1913 compared with 1912, when the number on the register was 246. Some of these places were discontinued as workshops, while others installed power. During the year 9 workshops were discontinued, 15 had power installed, 7 had new occupiers, 5 changed premises, and 17 new workshops were opened. The general condition of the workshops in the Borough is very good, which result may be put down to the particular survey of these places made in 1913, when every workshop was thoroughly overhauled and put into good sanitary condition. This is apparent from the small number of defects found during the year, 35 only, compared with 119 in the previous year. The main defect was want of cleanliness, chiefly due to old premises being made into workshops by new tenants.

3.—HOME WORK.

Outworkers' Lists, Section 107.

Nature of Work.	Sending twice a year.		
	Lists.	Outworkers.	
		Contractors.	Workmen.
Wearing apparel :—			
(1) Making	22	1	22
(2) Cleaning and washing ...	—	—	—
Nets other than wire nets ...	—	—	—
Furniture and upholstery ...	2	1	—
Total ...	24	2	22

There were no failures to send lists of outworkers nor were there any infringements of the Act.

4.—The Registered Workshops in the District are as Follows :—

Bakehouses	19	Masons	7
Brewers	16	Printers	8
Blacksmiths	8	Picture Framers ...	3
Blacksmiths and Wheelwrights ...	3	Piano Repairers ...	2
Brushmakers ...	2	Plumbers	4
Builders	6	Photographers ...	4
Boot Repairers ...	12	Ragsorters	2
Cycle Works	6	Saddlers	7
Cabinet Makers ...	12	Tailors	21
Coach Builders ...	3	Tinsmiths	4
Dressmakers	18	Tent & Rope Makers	2
Dressmakers and Milliners	4	Tripe Cleaners ...	2
Engineers	10	Upholsterers	2
Florists	2	Wagon Repairers ...	2
Jewellers	6	Wool Staplers ...	3
Milliners	15	Whitesmiths	3
Maltsters	4	Sundry Trades ...	12
Machine Repairs ...	2	Total	236

5.—Other Matters.

Class.		Number.
Matters notified to H.M. Inspector of Factories ...		nil.
Failure to fix Abstract of the Factory and Workshop Act (s. 133)		
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Acts (s. 5)	Notified by H.M. Inspector	13
	Reports (of action taken) sent to H.M. Inspector	13
Underground Bakehouse (s. 101) :—		
Certificates granted during the year		1
In use at the end of the year		1

C.—SANITARY ADMINISTRATION OF THE DISTRICT.

Staff.—The staff consists of the Inspector of Nuisances, an Assistant Inspector of Nuisances, and a Health Visitor. There is no exact line dividing the work of the first two officers, working as they do in intimate co-operation. It was considered advisable to give each of these officers distinct branches of work rather than districts, as the fact of rendering each responsible for a special section of the work gives him an interest in it, securing the proper administration of that section.

The Inspector of Nuisances deals with workshops and workplaces, including bakehouses, with dairies, cowsheds and milk-shops, and with offensive trades ; while the Assistant is Inspector under the Housing Regulations, 1910, therefore carrying out the house-to-house survey under Section 17 of the Housing, Town Planning, etc., Act, 1909, and also looks after common lodging-houses.

The other sanitary work, including removal of patients to the Infectious Diseases Hospital and disinfection, is divided between both Inspectors, according to circumstances.

As regards the Health Visitor, her work includes the supervision of infants notified under the Notification of Births Act, 1907, and the visitation of notified cases of phthisis. In her work she acts in co-operation with the School Nurse, with whom she also takes part in the management of the School for Mothers, which is conducted by a voluntary committee.

Hospital Accommodation for Infectious Diseases.—The following table gives the number of patients treated in the hospital during the year and the number in hospital on the 31st December, 1913 :—

	Remaining in Hospital 31st Dec., 1912.	Admitted to Hospital during 1913.	Remaining in Hospital Dec. 31st, 1913.	No. of Deaths.
Scarlet Fever ...	1	80	28	1
Diphtheria ...	2	100	4	7

Scarlet Fever.—During the year there were admitted to the Sanatorium 80 cases of Scarlet Fever, all of whom came from within the Borough. One death occurred, the child being almost moribund on admission.

The ages of the patients were as follows :—

1-5 years.	5-15 years.	15-25 years.	25-45 years.	45 & upwards.
21	52	6	1	—

The average stay in hospital was 50 days, the shortest being 38 days and the longest 139 days. This last case was one who developed abscess of the spine and on account of his weakly condition could not be discharged.

The complications among the cases were as follows :—

Rhinitis	18
Otitis Media ...	4
Endocarditis ...	4
Angina	1
Abscess of submaxillary glands ...	2
Rheumatism ...	1
Albuminuria ...	1
Croup and Tracheotomy	1
Meningitis ...	1
Spinal Abscess ...	1
Whooping Cough ...	1
Diphtheria... ...	2
German Measles ...	5

No fewer than 18 cases were complicated with rhinitis, which was of an infectious nature, attacking the patients during convalescence, and being very resistant to treatment. This condition when once it invades the wards, is difficult to get rid of, and seems to spread among the patients in spite of every precaution short of isolation of the affected cases. When there is no available isolation accommodation for such special cases control is almost impossible.

No case of Scarlet Fever is discharged from hospital until there is complete absence of nasal and ear discharge and until the enlargement of the submaxillary glands has resolved. The absence of discharge, and not the cessation of desquamation governs the dismissal of the patient. Usually the period of dismissal is between 5 and 6 weeks.

Diphtheria.—The cases admitted to hospital as Diphtheria were 100 in number. Two of these came from outside the district. Four of the cases turned out not to be cases of diphtheria, one was a case of follicular tonsillitis, two cases of ordinary sore throat, and one a case of measles. Other four of the cases were contacts who had no pathological lesions, but who had diphtheria bacilli in their throats.

The following table indicates the ages of the patients admitted :—

1-5 years.	5-15 years.	15-25 years.	25-45 years.	45 & upwards.
24	60	12	3	1

Seven deaths occurred, death in each case being due to cardiac complication. All of these cases had been ill some days before admission, the disease being much advanced with a large amount of membrane formation and great enlargement of the submaxillary glands. Usually the cases do not receive anti-toxin before admission to the hospital, and the delay in administration influences very largely the chances of recovery. There were no cases of tracheotomy.

The average stay in hospital was 36 days, the shortest being 16 days, and the longest 68 days.

The complications among cases were as follows :—

Cardiac paralysis ...	10
Enlarged glands ...	15
Rhinitis	20
Otorrhoea	2
Articular rheumatism	2
Paralysis of legs ...	5

Diphtheria patients have their throats and noses swabbed systematically twice a week for bacteriological examination, and no case is discharged from hospital until three successive swabs from the nose and throat show the absence of the bacillus of diphtheria.

The following is a statement of the expenditure in connexion with the Isolation Hospital, kindly supplied by the Borough Accountant :—

	£	s.	d.
Salaries and Wages of Staff	276	8	8
Medical Attendance	38	2	6
Groceries	80	1	7
Bread	23	14	10
Fish	21	15	6
Butcher's Meat	100	2	4
Milk, Butter and Eggs	101	12	9
Drugs and Disinfectants	63	19	4
Fuel, Light and Water	121	1	2
Rates, Taxes and Insurance	31	10	0
Removal of Patients	35	17	6
Repairs and Maintenance	74	19	11
Telephone Rental	11	0	0
Garden Seeds, etc.	13	0	9
Furniture, Bed Linen, etc.	128	6	3
Special Nurses	57	4	6
Miscellaneous	3	0	8
Year's Rent of Sanatorium	40	0	0
	1221	18	3
Amount received for nursing cases coming from outside the Borough	28	4	0
Total outlay in connexion with the Hospital for the year 1913	£1193	14	3

The total cost of the hospital for the year was £1,221 18s. 3d., and the net outlay to the Borough, after subtracting £28 4s. 0d., received for nursing outside cases, £1,193 14s. 3d.

Two items of expenditure call for comment, the first relating to "Furniture, bed linen, etc.," and the second "Special Nurses." The former expenditure was occasioned partly by the necessity arising for the purchase of extra beds and linen for dealing with a large number of cases, and partly by the replacing of old materials. Special Nurses had to be obtained on the occasion of sharp outbreaks of diphtheria and scarlet fever, and the amount was greater than usual on account of the difficulty of securing permanent nurses.

Taking the cost of the Hospital for the year at £1,221 18s. 3d., the cost of maintenance per patient comes out at 3/8 per day. The cost of food for patients and staff comes out at 8d. per head per day, a figure which is evidence of great economy in management.

Adoptive and Other Acts.—There are no local Acts dealing with public health matters. The Public Health Acts adopted by the Council are as follows :—

Public Health Acts (Amendment) Act, 1890.
Infectious Disease Prevention Act, 1890.
Public Health Acts (Amendment) Act, 1907.

Bacteriological Work.—To assist medical practitioners in diagnosing cases of infectious disease, facilities are provided by the County Council for the bacteriological examination of suspected material. Specimen boxes are provided by the County Medical Officer and the materials to be examined, sputum for bacillus tuberculosis, nasal and faucial discharges for bacillus diphtheriæ, and blood for Widal's reaction for enteric fever, are forwarded to the Bacteriological Laboratory of Birmingham University. A report is received by the medical man sending the specimen and a duplicate by the Medical Officer of the district in which the patient resides. In this way the Medical Officer of Health is kept informed of all specimens sent for examination, and he thereby gets early information, often before notification by the practitioner, of cases of infectious disease.

The specimens from the Borough examined in this way were as follows :—

	Positive.	Negative.	Total.
Widal's Reaction for Enteric Fever	4	8	12
Sputum for tubercle bacillus ...	16	76	92
Discharges for bacillus diphtheriae	57	147	204
Total ...	77	231	308

In the Borough Laboratory are examined all specimens taken by the members of the Public Health Staff and all specimens from cases at the Borough Sanatorium, as well as specimens concerning which the medical practitioner wishes an urgent report. The following specimens were examined in the Borough Laboratory :—

	Positive.	Negative.	Total.
Sputum for tubercle bacillus ...	4	13	17
Swabs taken from school children for bacillus diphtheriae...	28	729	757
Swabs from diphtheria patients at Sanatorium	211	685	896
Swabs from other cases ...	15	193	208
Total ...	258	1620	1878

The specimens of sputum were chiefly from school children examined during school medical inspection and suspected to be phthisical. Owing to diphtheria being prevalent during the year a very large number of swabs were taken from school children who were swabbed whenever they were reported to be suffering from sore throat. The large number of swabs from the Sanatorium was a result of the large number of patients dealt with. Cases of diphtheria are not discharged from hospital until three successive swabs from the nose and throat give a negative result as regards diphtheria bacillus.

Other bacteriological work in connexion with the examination of milk has already been dealt with in considering the milk supply.

Disinfection.—In previous annual reports the pressing need for an efficient steam disinfector has been pointed out. The question has been discussed in a tentative way during the year, but without material result so far.

At present disinfection of bedding and clothing is done in an unsatisfactory manner by spraying. This method is not only uncertain in its results, but inconvenient to the people who have often to sleep on the bedding within a short space of time after disinfection. Disinfection by steam would not only be much more efficient as far as the destruction of infection is concerned, but would save the people much inconvenience and labour. In disinfecting a room after infectious disease the walls, floor, furniture, and bedding are sprayed with a solution of formalin. After spraying the room is kept closed for 12 hours, if possible, to allow the formalin vapour to penetrate the bedding and clothing. The clothing and all washable articles are put into a tub of disinfectant and afterwards washed. Articles which by their nature, are unwashable, are left in the room during spraying and are thus disinfected as far as possible.

Not only is a steam disinfector very necessary in connexion with the control of infectious disease, but it is also highly desirable in dealing with verminous persons, and especially school children. School medical inspection has shown how necessary it is to have baths constructed in conjunction with a steam disinfector, in order that verminous and dirty children can have their bodies cleansed and at the same time their clothing disinfected.

A steam disinfector combined with a cleansing station is one of the most important sanitary matters which the Council have got to deal with, and it is to be hoped that before long they will take the question into their serious consideration and by its provision assist materially in the sanitary administration of the town.

D.—PREVALENCE OF AND CONTROL OVER ACUTE INFECTIOUS DISEASES.

The death-rates from the principal infectious diseases are represented in the following table, along with those for England and Wales :—

	Enteric Fever.	Small-Pox.	Measles.	Scarlet Fever.	Whoop Cough.	Diphtheria.
England & Wales	0.04	0.00	0.28	0.06	0.14	0.12
96 Great Towns	0.04	0.00	0.34	0.07	0.17	0.13
145 Smaller Towns	0.05	0.00	0.30	0.05	0.13	0.11
England & Wales less 241 Towns	0.04	0.00	0.20	0.05	0.12	0.11
Shrewsbury	0.00	0.00	0.06	0.00	0.10	0.54

The important points to be noted as regards Shrewsbury are the absence of deaths from enteric fever and scarlet fever, the very low death-rate from measles, and the high death-rate from diphtheria.

NOTIFIABLE INFECTIOUS DISEASES.

During the year under review the number of cases notified under the Infectious Diseases Notification Act was 213, and may be tabulated according to the notifications in each month of the year.

Infectious Diseases Notified, 1913.

	Diphtheria.	Scarlet Fever.	Erysipelas.	Enteric Fever.	Ophthalmia Neonatorum.	Puerperal Fever.	Poliomyelitis.
Jan.	10	2	1	...	...	...	...
Feb.	5	...	...	...	1	...	...
March	3	...	...	...	...	...	...
April	11	2	2	...	...	...	...
May	7	2	1	...	1	...	...
June	13	4	2	...	1	...	...
July	14	4	...	...	1	...	...
Aug.	10	3	...	...	1	...	...
Sept.	4	13	...	2	...	...	...
Oct.	6	13	...	...	1	...	...
Nov.	18	23	...	...	...	...	1
Dec.	9	19	3	...	...	...	...
	110	85	9	2	6	0	1

The following table shows the number of notifications from the various infectious diseases compared with the numbers for the previous ten years :—

Infectious Diseases Notified, 1903-1913.

	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Small Pox	2	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membran. Croup	11	8	17	47	66	71	69	45	30	43	110
Erysipelas	22	11	16	10	10	17	27	16	13	10	9
Scarlet Fever	20	66	39	33	59	225	369	65	156	20	85
Typhus Fever	...	...	...	...	...	...	1	...	...	...	...
Enteric Fever	8	9	8	10	3	10	12	1	...	...	2
Puerperal Fever	3	1	...	1	...	3	4	1	1	1	...
Ophthal. Neon.	...	...	...	...	...	...	...	...	...	1	6
Poliomyelitis	...	...	...	...	...	...	...	...	...	...	1
Total	66	95	80	101	138	326	482	128	200	75	213

The total for 1913 is much greater than the previous year and slightly in excess of the year 1911.

Scarlet Fever.

The number of cases of scarlet fever notified was 85, which is much greater than in the previous year, but less than in the years 1908, 1909, and 1911. As regards the year 1912 it may be stated that the number was the lowest noted during the previous ten years.

There were no deaths from the disease in persons belonging to the Borough. One death occurred in the Sanatorium, but the patient came from another district.

Scarlet Fever Death-rate.

England and Wales ...	0.06	per	1,000	persons	living
96 Great Towns ...	0.07	,,	,,	,,	,,
145 Smaller Towns ...	0.05	,,	,,	,,	,,
England & Wales less 241 Smaller Towns	0.05	,,	,,	,,	,,
Shrewsbury	0.00	,,	,,	,,	,,

Of the total cases notified 79, or 93 per cent., were removed to the Isolation Hospital.

During the first six months of the year only ten cases of scarlet fever were notified, and of these three were definitely imported, while the others occurred sporadically ; on two occasions, however, there were two cases notified in the same house. The cases notified in the different months were as follows :—

Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
2	—	—	2	2	2	4	3	13	13	23	19

It will be seen that up to the end of August only 17 out of the 85 cases were notified, and little relation could be found up to that time between the cases. On the 4th September the Medical Officer of Health's attention was drawn to four suspicious cases of scarlet fever in one house, and on making enquiries discovered next door a girl who had been seen by a doctor five days before without the case being recognised as one of Scarlet Fever. She showed on the 4th September typical desquamation. It would appear that this child infected the other four next door, with whom she played frequently. From these cases there occurred, more or less directly, during the month of September, seven others attending Coleham

Mixed or Infants' School. Thus, from the original missed case there were 11 cases directly traceable. A careful watch was kept over all absentees from these schools, and all suspected cases were carefully examined. These measures, together with prompt removal to hospital and disinfection, got rid of the disease from both schools by the end of the month.

The disease, however, during October broke out in another school, St. Mary's, and here again its spread was due to a missed case. Three children attending St. Mary's School were notified on the 28th and 29th October and on investigation it was found that a child attending the same school had been absent about a fortnight previously on account of sore throat, no rash being recognised by her mother. When examined she was found to have desquamation of her fingers and to have a discharge from one of her ears. As she was attending school up till the 28th October it seems certain that the other four cases occurring in children attending the same school, notified on the 28th October, 1st and 2nd November, were infected by her.

During November relationship was found between nine cases attending Coleham Mixed or Infants' School. The spread in this school again was due to an unrecognised case, a boy who had been kept at home on account of a rash, the other children in the house being allowed to attend school. No case of the disease had occurred at Coleham School between the 29th September and the 12th November when the disease again broke out here.

During December the cases notified occurred in different parts of the town, but 7 cases were children attending St. Chad's Infants' School, and though the whole of the children were examined, no missed case was found, nor could the original source of infection be ascertained.

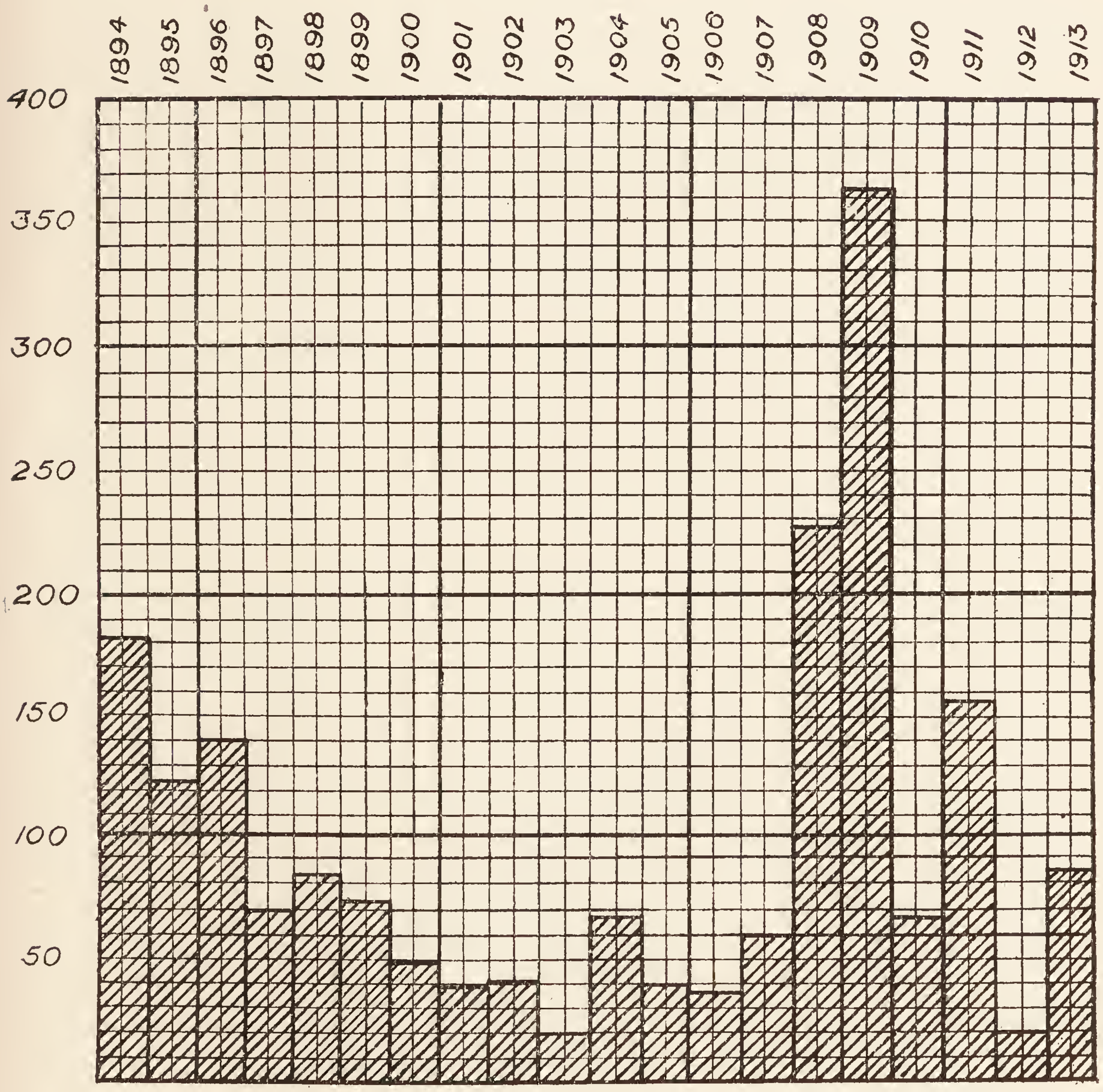
The ages of the cases notified were as follows :—

1-5 years.	5-15 years.	15-25 years.	25-45 years.	45 & upw'ds.
22	56	6	1	—

All of those in the 5-15 group were school children, so that the great majority of cases, or 78 out of 85, were connected with schools

The disease generally was of a mild character, only one death occurring, and this was a weakly child who had just come into the district on account of her health.

The following chart indicates graphically the number of cases notified each year since 1894 :—

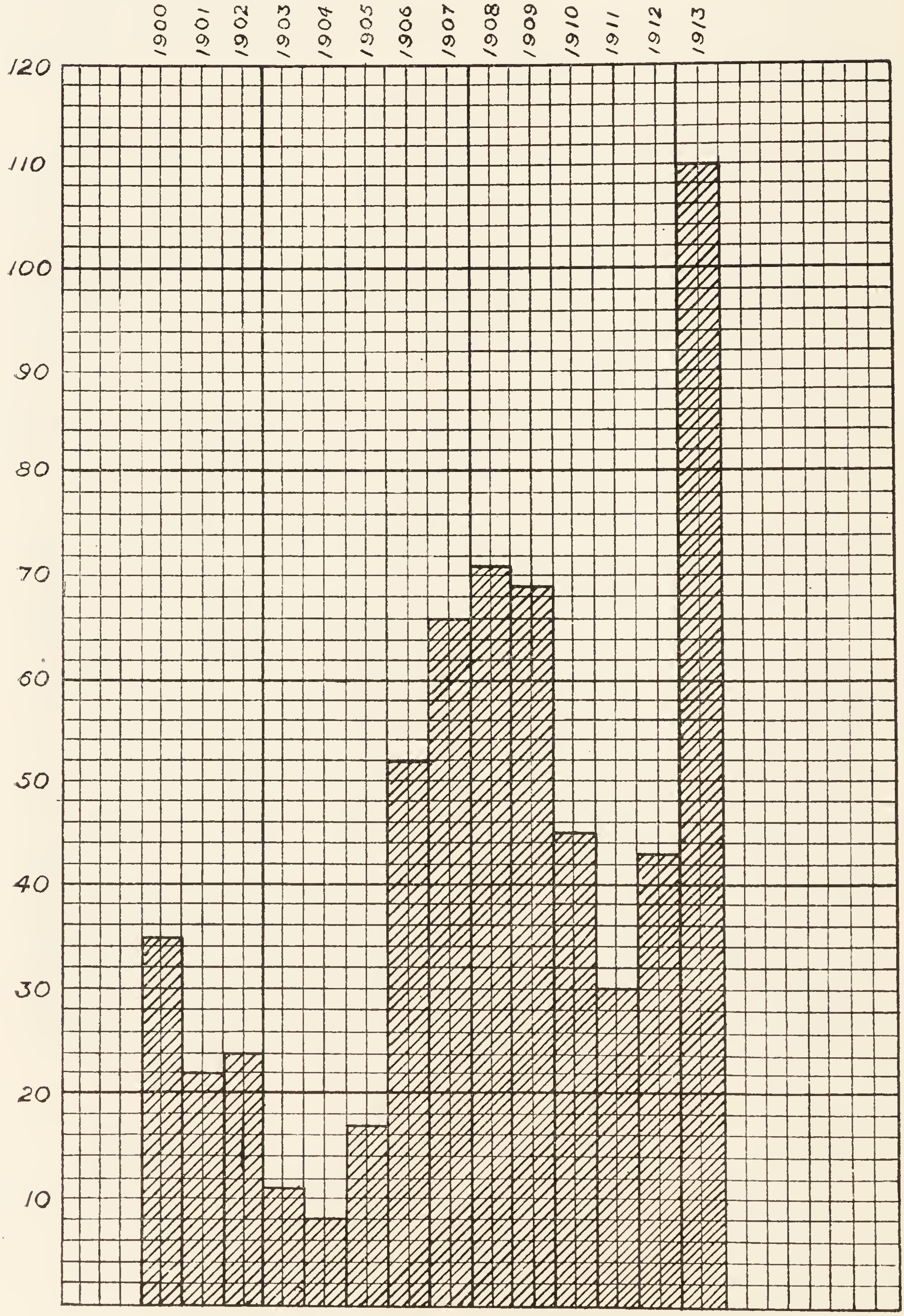


SCARLET FEVER NOTIFICATIONS 1894-1913.

Diphtheria.

During the year there were 110 cases of diphtheria notified. This number much exceeds that of the previous year, and is the highest number for the last 14 years.

The following chart represents graphically the number ot cases notified during the last 14 years :—



Diphtheria Notifications 1900-1913

Incidence of the disease.—Diphtheria was more or less prevalent in the Borough throughout the whole year, the numbers being large in June and July, the outbreak reaching its maximum in November.

Below are represented the numbers occurring in each month :—

Jan.	Feb.	Mar.	Apl.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
10	5	3	1	7	13	14	10	4	6	18	9

During the first six months there were 49 cases and in the five months following 61 cases. The disease was prevalent during August, when the schools were closed, but in September and October the numbers had become much reduced.

Ages of persons attacked.—The following table indicates the number of persons attacked in each of the age-groups :—

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL.
0-5	5	1	...	6	1	3	2	3	1	...	...	3	25
5-10	2	2	2	4	4	6	5	7	1	3	5	3	44
10-15	1	1	...	...	1	3	3	...	2	3	7	1	22
15-25	...	...	1	...	1	1	4	...	...	...	2	1	10
25-35	2	...	...	1	...	...	...	...	...	...	3	...	6
35-45	...	...	...	...	...	...	...	...	...	...	1	1	2
45-55	...	1	...	...	...	...	...	...	...	...	...	...	1
	10	5	3	11	7	13	14	10	4	6	18	9	110

Under 5 years of age there were 25 cases, between 5 and 10 years of age, 44 cases, and between 10 and 15 years, 22 cases, so that 91 out of 110 cases were under 15 years of age. In this connexion it may be stated that of those attacked 66 attended school. Thus 66 out of 91 under 15 years of age were school children, while 25 had not yet entered school. The age-group 5 to 10 years was attacked most severely.

Schools Invaded.—The school children attacked are indicated in the following table according to schools.

	St. Michael's Boys.	St. Michael's Girls.	St. Michael's Infants.	All Saints' Girls.	All Saints' Infants.	Abbey.	St. George's.	St. Mary's.	St. Chad's.	Lancasterian.	Other Schools.
January ...	1	...	1	...	...	...	...	...	...	...	1
February ...	1	...	...	...	1	...	...	...	1	...	...
March ...	...	...	...	...	...	...	...	1	...	...	...
April ...	...	...	3	...	...	...	1	...	...	...	...
May ...	1	2	2	...	1	...	...	...	...	...	...
June ...	2	3	2	...	1	1	...	...	...	...	...
July ...	2	2	...	...	...	...	1	...	...	2	...
August ...	...	2	1	...	...	...	...	...	...	...	2
September...	...	2	...	.	1	1	...	...	...	...	...
October ...	...	2	1		1	...	1	...	1	...	...
November ...	1	4	...		3	...	...	1	...	...	1
December ...	...	...	4	...	...	...	...	...	...	...	1
Total 66.	8	17	14	2	8	3	3	2	2	2	5

This table indicates that the disease particularly affected certain schools, St. Michael's Boys' and Girls', St. Michael's Infants', and All Saints Infants' schools. It also points to the chief centre of origin and spread of the disease, 49 out of 66 school children affected coming from St. Michael's and All Saints' schools.

Districts affected.—Of the 110 cases notified 44 came from districts in the Borough other than Castle Fields district, where St. Michael's and All Saints' schools are situated. Among these 44 were three children attending St. Michael's school. These figures, showing as they do that 66 out of 110 cases occurred in connexion with the Castle Fields district, give an admirable indication as to the means of spread of the disease.

Mortality.—In considering mortality it is advantageous to compare the first six months with the following six months. In the first half of the year the disease, it would appear, was very virulent but this may be accounted for by the fact that the parents of the children were inclined to treat the disease as an ordinary sore throat, and not to send for medical advice until the patient was severely attacked and had less chance of recovery.

In the first six months, out of 49 cases there were 10 deaths, making an unusually high mortality of 20 per cent., while in the following six months there were 6 deaths out of 61 cases, making a mortality of nearly 10 per cent, half the mortality of the first half of the year. Fourteen of the total 16 deaths were in school children, and of the remaining two one was 17 and the other 3 years of age. The lower mortality in the last six months may be put down to the care exercised by the parents and the regular and careful supervision of school absentees by the public health staff, which will be noted later.

The death-rate from Diphtheria for the year is very high, namely 0.54 per 1,000 of population.

In the following table are represented the Diphtheria death-rates for Shrewsbury, England and Wales and the average for the Great Towns and the Smaller Towns :—

Diphtheria Death-rate.

England and Wales ...	0.12	per	1,000	persons.
96 Great Towns ...	0.13	,,	,,	,,
145 Smaller Towns ...	0.11	,,	,,	,,
England and Wales less the 241 towns...	0.11	,,	,,	,,
Shrewsbury ...	0.54	,,	,,	,,

Cause of prevalence of the disease.—There can be no doubt, when one considers the tables relating to the ages of children affected and the schools implicated, that St. Michael's School acted as the origin and spread of the disease. St. Michael's Infants' School was implicated first, the disease then spreading to St. Michael's Girls' and Boys' Schools, and latterly to All Saints' Infants' and Girls' Schools. The involvement of St. Michael's Girls' School is an almost natural consequence of the presence of the disease in the Infants' School, the disease being carried to older members of the family by the infants. All Saints' School becomes implicated as a result of St. Michael's Girls' School being affected, as it is quite common for the older boys and girls in a family to attend St. Michael's Schools and the younger children to attend All Saints' Infants' school. This has been frequently noticed, and in two instances, during November, one member of a family attending St. Michael's and another All Saints' Infants' school were attacked with the disease. The spread from Castle Fields to other parts of the town can only be traced in a few cases, but with such a centre of infection its spread to other parts can be readily expected.

The Castle Fields district, which is thickly populated, is essentially a working class district, with a large number of children in the neighbourhood. The habits of the people undoubtedly tend towards the spread of the disease. It is a frequent occurrence to have the patient nursed in the living room where the older members of the family live during the day and take their meals, the members of the family being allowed to play with the patient freely, while neighbourly persons go in freely to discuss the character of the disease and its treatment before a doctor is called in. This is one of the conditions which one must consider in attempting to control the spread of the disease. The procedure for the prevention of the spread of the disease, which will be considered later, consists in discovering at the earliest time the children suffering from sore throat and in dealing with them in such a way as to prevent infection.

One factor tending towards the prevalence of the disease was the presence of "sore throat" in an epidemic form in the early summer, and especially during the months of October and November. It would appear that the injured faucial tissues offer a particularly suitable nidus for the development of the bacillus of diphtheria. The parents are also apt to treat cases of sore throat in a light spirit, and scarcely recognise the danger of their being possibly diphtheritic.

Measures taken to prevent the spread of the disease.—Under ordinary circumstances from every case of sore throat occurring among school children a swab is taken of the faucial secretion for bacteriological examination. If a child at school complains of sore throat he is sent for examination to the Medical Officer of Health, who is also School Medical Officer. If the child is an absentee and it is reported by the teacher that the child is suffering from sore throat, the School Nurse visits the child, and if no doctor is in attendance the throat is swabbed. It is the practice to exclude all children suffering from sore throat until the result of the bacteriological examination is known. The result is usually available on the following morning. Should the swab show the presence of diphtheria bacilli the child is treated as a case of diphtheria, and is isolated and the house disinfected.

In this connexion it may be stated that the teachers are instructed to send at once to the Medical Officer of Health particulars of any child complaining of, or absent on account of, sore throat, special forms and addressed envelopes being provided for this purpose. Although this system has been in operation for three years it was considered necessary, in September, to draw particular attention to the necessity of care in dealing with such cases, and for this purpose a Memorandum was sent to the head teachers of all the schools, a copy of which is here given.

IMPORTANT.

MEMORANDUM FROM THE SCHOOL MEDICAL OFFICER.

Diphtheria and Scarlet Fever.

I wish to draw your attention to the importance of making a record of any children absent on account of sore throat, or present in school though complaining of sore throat, and of at once giving me particulars of any child so affected. A mild attack of either Diphtheria or Scarlet Fever may simply give a slight sore throat with little other evidence of the disease, yet a mild case may be the means of the disease spreading to other children and attacking them severely. Desquamation or peeling of the skin of the hands is also found after an attack of Scarlet Fever, so that the teacher on recognising such a condition should at once inform me of the fact. When a case of either disease has occurred in the school the teachers should be especially watchful.

Any suspected case in school may be sent to me for examination *any morning between* 9-30 *and* 10 *a.m.*, but children submitted for examination should in all cases be accompanied by a note from the teacher stating the name of the child and the condition to be noted.

When one case was followed by another in the same school that school was kept under special supervision by visits daily or on alternate days by the School Nurse or the Medical Officer of Health. All absentees whose absence was not definitely accounted for, or who were ill and had not a doctor in attendance were visited, and if there was a complaint of sore throat, or if any suspicion of diphtheria existed, their throats were swabbed for bacteriological examination. In this way all the absentees from St. Michael's Boys,' Girls' and Infants' Schools were kept under supervision from April, and later, during November, All Saints' Girls' and Infants' Schools were also dealt with particularly in this way.

The outbreak proper had its origin, it appears, in St. Michael's Infants' School, from which three cases were notified in April, but during this month, it must be mentioned, one diphtheria case under 5 years of age not attending school had two brothers attending St. Michael's Infants' School. Two children attending St. Michael's Infants' School were attacked in May, and here it is notable that each of these were the only children in their respective families. In St. Michael's Girls' School there were two girls notified in May, and each of them had a brother in St. Michael's Infants' School.

In June one notified case in St. Michael's Girls' School and two in St Michael's Boys' School had each a brother at St. Michael's Infants' School. These facts would point definitely to a source of infection in the Infants' School, and as cases continued to occur there drastic action was taken in the beginning of June. On the 9th and 10th June all the infants at the school were swabbed, and where there was evidenec of nasal affection nasal swabs were also taken. Out of 101 swabs taken there was not a single positive result. The children absent from school on the 9th October were swabbed at their homes on the following day, and of the 40 swabs taken in this way not a single positive result was obtained. Thus out of 141 swabs taken not one was found to give any indication as to the source of infection. Three conclusions were to be drawn from this result. The one was that the infective child or children may have been shedding diphtheria bacilli from the nose without any pathological lesion being visible ; the other was that the school desks or books had been contaminated by the germs of the disease ; and the last that the source of infection was due latterly to infection from boys and girls in St. Michael's Mixed School, for, as noted above, one infant notified in June had a sister in St. Michael's Girls' school, and two other infants notified in the same month had each a brother in St. Michael's Boys' School.

To cope with the last vigilance was exercised over absentees and cases of sore throat in St. Michael's Mixed School. As regards the first and second possibilities drastic action was taken. Although unwilling to adopt school closure except as a last resort, I was persuaded to advise it on account of the greatly reduced attendance, which was chiefly due to the alarm occasioned in the neighbourhood by the recurring cases and by the number of deaths, and also on account of the swabbing of all the children failing to give any definite result. The closure of the school for three weeks was advised and again for a further period of two weeks. The whole school was disinfected on the 13th June by means of the formalin spray, the books, pencils, etc., which had been used by the children were burned, and the drains were completely overhauled, pedestal w.c.'s being substituted for Adams' trough closets.

These measures seem to have had a beneficial effect, for only two cases occurred in connexion with the Infants' School after they were adopted till the beginning of December.

The disease, however, continued to attack children in St. Michael's Girls' School, and in November the disease invaded All Saints' Girls' and Infants' Schools. The involvement of All Saints' Girls' and Infants' Schools can be expected as often it is found that one member of a family attends St. Michael's and another All Saints' Schools. In November two cases of diphtheria occurred in each of two houses where it was found that a girl in the family attended St. Michael's Girls' School and another child attended All Saints' Infants' School.

Owing to cases continuing to occur in connexion with St. Michael's Girls' School, on the 3rd November, in addition to the ordinary procedure of swabbing absentees and reported cases of sore throat, swabs were taken from girls who gave a history of sore throat within four weeks previously, who looked pale or ill or who showed nasal discharge.

In two days 42 swabs were taken, and three were found to give diphtheria bacilli. The three cases gave a history of slight sore throat. These cases were treated as diphtheria, and admitted to hospital.

Close supervision was kept over this school, all absentees being visited, and towards the end of the year the disease showed signs of abating, only nine cases being notified in December, and none in St. Michael's Mixed School, although four occurred in St. Michael's Infants in that month.

In addition to swabbing, the class-rooms in which the cases occurred in this school were thoroughly disinfected by means of the formalin spray, books and other articles likely to be contaminated being disinfected as far as was practicable to do so.

The month of November provided 18 cases of diphtheria, occurring in weeks as follows: 1st week, 6 cases; 2nd week, 3 cases ; 3rd week, 8 cases, and in the 4th week one case. It has to be recognised, however, that several of the cases were only slightly attacked, redness of the throat being the only symptom. The early visitation of absentees by the School Nurse assists in the discovery of the cases before the disease develops to any extent. The low mortality during the second half of the year would point to the good results from early visitation of absentees and the early recognition of the disease.

One difficulty, however, was encountered in dealing with the prevention of the disease. Children were unwilling to admit to the teachers that they had a sore throat, their dislike to having their throats swabbed being the chief reason. The parents generally welcomed the attention paid to their children by the School Nurse and Medical Officer, and most willingly helped, but it must be admitted that occasionally one came across a parent who objected to the visits of the public health staff. If no doctor is in attendance on such cases there exists a danger which is difficult to overcome. One missed case of diphtheria may be the cause of much mischief.

In dealing with the control of diphtheria there have been taken by the public health staff and examined in the Borough Laboratory the following swabs for the bacillus of diphtheria :—

	Negative.	Positive.
From school children ...	729	28
From other contacts ...	193	15
	922	43

Total 965.

Hospital Isolation.—Hospital isolation was urged in all cases where home isolation could not be thoroughly carried out. The following table indicates the number of cases notified each month alongside the number admitted to the hospital :—

	Notifications.	Admissions to Hospital.
January	10	6
February	5	4
March	3	3
April	11	9
May	7	7
June	13	11
July	14	12
August	10	7
September	4	4
October	6	6
November	18	16
December	9	9
	110	94

Thus, 94 out of 110 were admitted to Hospital. The efficient isolation of the cases is absolutely necessary if the control is to be effective. As bearing on efficient isolation it may be cited that in two instances where a case was nursed at home another case developed in the same house, while in only one instance did another person develop the disease after one had been removed to hospital, and this was three days later, the case having probably been infected before the removal of the first one to hospital. In only two other instances were there more than one case notified in the same house, the patients being notified at the same time.

In June the hospital accommodation for diphtheria was severely taxed, but by transferring the Scarlet Fever cases to the Small-Pox Hospital at Underdale and by utilising the Scarlet Fever wards for diphtheria the difficulty was overcome.

Again in November the rush of diphtheria cases caused difficulty, but by using part of the Entrance Hall of the administrative block, which adjoins the diphtheria ward, the cases were suitably dealt with.

In dealing with hospital cases no patient is discharged until three successive swabs from the throat and nose have proved the absence of the diphtheria bacillus. As regards cases nursed at home, before disinfection is carried out, two successive negative swabs must have been obtained. In taking these swabs assistance is offered to the doctor, who, if he cares, can be assisted by the School Nurse taking the swabs from the patient. It may be said, however, that this is seldom necessary, for, when the patient is nursed at home the parents are usually under such financial circumstances as to be able and willing to pay for the doctor taking the swabs.

It will be evident from the steps taken to control the disease that a great amount of work was thrown on the public health staff, but this work was done in a most willing and capable manner by every member.

Enteric Fever.

There were two cases of Enteric Fever notified, one on the 23rd and the other on the 26th September. These were two ladies who within ten days of their return from a holiday on the Continent developed the disease in a typical form, so that undoubtedly the infection was obtained during their stay abroad. No further cases occurred. One of the cases was nursed privately, and the other in the Salop Infirmary. Since 1909, in which year there were 12 cases of enteric fever, there has been only one notified up to the present year, and this case, which occurred in 1910 was a doubtful one.

Erysipelas and Puerperal Fever.

Nine cases of Erysipelas were notified during the year. One was between 5 and 15 years of age, 4 were between 25 and 45 years, 3 between 45 and 65 years, and one over 65 years of age. No deaths occurred. There were no cases of puerperal fever notified.

Ophthalmia Neonatorum.

Six cases of Ophthalmia Neonatorum were notified during the year. All of these cases were kept under supervision by the health visitor. The general rule is for the child to be taken to the Eye, Ear, and Throat Hospital by the parent, and for the health visitor to see that the treatment is applied and to apply it if necessary. She also keeps under supervision cases which are treated by the general practitioner, where there is not a nurse in attendance.

Acute Poliomyelitis.

One case was notified. This was a girl 8 years of age. She commenced with a feverish attack, collapsing two days later. At first the case was thought to be one of rheumatism, but the child later developed paralysis of both legs, one from the hip to the foot, and the other leg from the knee to the foot. The case it would appear was one of anterior poliomyelitis, but whether of the infective type is doubtful, as no further cases were notified either in the Borough or in the surrounding districts.

NON-NOTIFIABLE INFECTIOUS DISEASE.

Measles.

The Borough was especially free from Measles during the year. From the schools, and the number notified from the schools gives a general idea of the prevalence of the disease, there were only 15 notified altogether, and 11 of these occurred in January. Two deaths occurred, giving a measles death-rate of 0.06 per 1,000 of population.

In the following table the measles death-rate for Shrewsbury is compared with that for England and Wales :—

	Measles death-rate.
England and Wales	0.28
96 Great Towns	0.34
145 Smaller Towns	0.30
England and Wales, less 241 Towns ...	0.20
Shrewsbury	**0.06**

It is seen that the rate for Shrewsbury is less than a quarter of that for England and Wales.

Whooping Cough.

Whooping Cough was not very prevalent during the year. The greatest number occurred in June and November, in which months there were respectively notified from the schools 11 and 25 cases. In all, 51 cases were notified from the schools during the year. The two schools particularly affected were All Saints' Infants' in June and Trinity Infants' in November. There was no occasion to close either of the schools.

Three deaths occurred, giving a whooping-cough death-rate of 0.10 per 1,000. The following table shows the death-rate compared with that for England and Wales :—

	Whooping Cough death-rate.	
England and Wales ...	0.14	per 1,000 persons.
96 Great Towns ...	0.17	,, ,, ,,
145 Smaller Towns ...	0.13	,, ,, ,,
England and Wales less 241 Towns	0.12	,, ,, ,,
Shrewsbury	**0.10**	,, ,, ,,

Shrewsbury thus compares favourably with the rest of England and Wales and with the Smaller Towns with which it is comparable.

In controlling these two diseases assistance is obtained from the school teachers, who notify weekly all children absent on account of non-notifiable infectious disease or suspicious cases of infectious disease. These children are afterwards visited by the School Nurse, assisted, when there is an outbreak of serious proportions, by the Health Visitor, and instructions are given to parents. This form of notification is more useful than notification by the medical attendant would be, as very few cases are ever seen by a medical man.

In spite of all instruction one finds that many parents make little attempt at isolation, and do not make a pretence of preventing the other children in the house from developing the disease, since they consider that it is better for all to have the disease at once when it is in the house. Parents, however, are taking more care to prevent complications, which is a still more important matter, and here it is evident that the instructions of the School Nurse and Health Visitor are having effect.

E.—PREVALENCE OF AND CONTROL OVER TUBERCULOSIS.

There were 28 deaths from all forms of tuberculosis, which give a death-rate of 0.95 per 1,000 of population. Of these deaths, 23 were from phthisis or pulmonary tuberculosis, two from tuberculous meningitis and three from other forms of tuberculosis.

The phthisis death-rate for the year was 0.77 per 1,000 persons, which is less than that for 1912, when the rate was 1.08. The rate for 1913 is the lowest yet recorded. In the following table the phthisis death-rate is compared with that for England and Wales in quinquennial periods. It shows that the phthisis death-rate for England and Wales and for Shrewsbury is on the downward tendency.

Year.	Shrewsbury. Phthisis Deaths.	Death-rate per 1,000 living.	Death-rate England & Wales per 1,000 living.
1881	41	1.18	1.83
1882	49		
1883	51		
1884	39		
1885	61		
1886	39	1.79	1.63
1887	40		
1888	60		
1889	38		
1890	63		
1891	64	1.83	1.46
1892	34		
1893	57		
1894	52		
1895	41		
1896	52	1.44	1.32
1897	36		
1898	38		
1899	29		
1900	41		
1901	34	1.38	1.22
1902	39		
1903	44		
1904	50		
1905	33		
1906	32	1.08	1.10
1907	30		
1908	37		
1909	33		
1910	27		
1911	38	1.27	1.08
1912	32	1.08	
1913	23	0.77	

The ages of those dying from phthisis were as follows :—

0-5 years.	5-15 years.	15-25 years.	25-45 years.	45-65 years	65 and upwards.
0	1	1	11	7	3

From this table it is seen that the greatest mortality is at the prime of life, 25-45 years of age, a time when a life is of the greatest value socially and economically.

Control of Tuberculosis.

By the Public Health (Tuberculosis) Regulations, 1912, the notification to the Medical Officer of Health of all cases of tuberculosis, whether occurring in the private practice or in Poor Law practice of a medical man, is necessitated. Further, the admissions and discharges of tuberculous patients from hospitals whether Poor Law or otherwise, are required to be notified. In this way not only does the Medical Officer of Health get early notification of all cases, but he learns of their movements, which in the case of Poor Law cases are apt to be frequent and so dangerous to the public in the matter of infection.

The following is a list of the notifications of tuberculosis during the year :—

	All Ages.	Under 1 year.	1—5 years.	5—15 years.	15—25 y'rs.	25—45 y'rs.	45—65 y'rs.	65 years & upwards.
Private Cases :—								
Lungs	26	...	...	2	6	14	3	1
Larynx	2	...	...	...	...	2	...	...
Knee-joint	1	...	...	...	...	1	...	...
Pleura	1	...	...	1	...	...	...	...
Peritoneum	1	...	...	...	...	1	...	...
Others	2	...	1	...	...	1	...	...
Hospital Cases :—								
Lungs	6	...	...	3	3	...	...	...
Knee-joint	7	...	...	3	3	1	...	...
Hip-joint	3	...	...	2	1	...	...	...
Other joints and bones ...	5	...	...	3	1	...	1	...
Glands	1	...	...	1	...	...	...	...
Mediastinal Glands ...	1	...	...	1	...	...	...	...

Poor Law Cases.	Form A.	Tuberculosis of Lungs ...	4
	Form C.	,, ,, ,, ...	3
	Form D.	,, ,, ,, ...	4
		Total ...	11

Shirlett Sanatorium.	Form C.	Admissions ...	9 cases.
	Form D.	Discharges ...	12 cases.
		Total ...	21 cases.

All of these 21 cases had already been notified.

The primary notifications were 67 in number, 33 private cases, 23 hospital cases, and 11 Poor Law cases. It will be seen from the table that 42 were cases of pulmonary tuberculosis, and therefore likely, unless special precautions be taken, to be sources of infection.

Of the 67 cases notified during the year 55 received visits from the health visitor (Miss Jesper) on receipt of the notification. Those receiving further visits were as follows :—

12	received	2	subsequent	visits.
4	,,	4	,,	,,
5	,,	5	,,	,,
9	,,	6	,,	,,
5	,,	8	,,	,,
3	,,	9	,,	,,
3	,,	11	,,	,,
4	,,	12	,,	,,

In addition to these, 599 visits were paid to cases notified during 1912 but still kept under supervision during 1913. The total visits made to cases of tuberculosis by the health visitor during the year were 921 in number.

The health visitor provides the patients with leaflets of instructions, teaches the patients to take their temperature and generally advises them as to open-air treatment and the prevention of infection. Sputum flasks are provided for patients who cannot afford to pay for them, and during the year they were provided for 23 cases.

The Council provides four phthisis shelters, and during the year these were taken advantage of by 7 patients. A larger number of shelters would be provided by the Council if the patients had space available for their erection, but the patients who have suitable yards or gardens for the purpose are only sufficient to keep four shelters going.

When a case of tuberculosis is notified the house is visited by one of the Inspectors, who investigates the sanitary condition, and tests the drains just as he does in the case of notifiable infectious diseases. Disinfection is suggested and offered whenever advisable, and is seldom refused.

The following table gives in summary form the number of cases of tuberculosis of all kinds notified, visited, receiving treatment, etc. :—

Number of cases notified in 1913 ...	67
Number of cases visited	55
Number of notified cases dying in 1913 (5 of these notified in 1912, and 3 in 1911) ...	18
Number of cases leaving Shrewsbury ...	1
Number of cases not traced (Workhouse cases)	3
Treated at County Sanatorium, Shirlett (6 notified in 1912, and 6 in 1913) ...	12
Treated at Atcham Workhouse Infirmary ...	8
Treated at Salop Infirmary (In-patients) ...	11
,, ,, ,, ,, (Out-patients) ...	8
Treated in Council's Shelters	7
Treated in Private Shelter	1

The County Council, in its scheme for dealing with tuberculosis under the Insurance Act, 1911, has in addition to domiciliary treatment made arrangements for the treatment of so-called curable cases among insured persons at Shirlett Sanatorium. No provision has yet been made by the County Council for treating the cases which are not hopeful as regards cure and for whom isolation accommodation is necessary, not only for educative purposes, but, in some cases where proper isolation at home is impossible, for the prevention of infection. The Shropshire Association for the Prevention of Consumption, who manage the Sanatorium at Shirlett, still make provision for cases other than insured persons who constitute the class of curable cases. The accommodation, however, for such cases, since the County Council have taken over a certain number of beds, has become somewhat limited.

Part of the County Council scheme for dealing with tuberculosis consists in instituting Dispensaries at different centres under the charge of the Tuberculosis Officer. The first of these will be opened shortly in Shrewsbury, and to this persons residing in Shrewsbury may go for advice and treatment on certain days of the week. On certain other days persons from the Atcham District may attend the Dispensary which is intended to deal with the Borough of Shrewsbury and the Atcham District. It is proposed that the Borough health visitor shall attend the Dispensary when cases from the Borough are being dealt with, and that she shall act in conjunction with the Tuberculosis Officer appointed by the County Council.

Under the auspices and at the expense of the Shropshire Association for the Prevention of Consumption the Tuberculosis Exhibition of the National Association came to Shrewsbury in October. It was attended by 12,225 people, including 2,009 children from the schools in the Borough. Popular lectures on various phases of the question of tuberculosis were given and largely attended. From the interest taken in the exhibits and the lectures, both by the old, and especially by the young, one can anticipate good results from the point of view of education.

F.—INVESTIGATION OF OTHER DISEASES.

Diarrhœa.

There were 12 deaths from diarrhœa and enteritis, 10 being under one year, one between 1 and 2 years, and one between 25 and 45 years of age. The death-rate from diarrhœa of persons under 2 years of age is thus 17.88 per 1,000 births. This rate is about four times that for the year 1912, and may be accounted for by the heat in the summer and autumn, which favours the prevalence of the disease. In the following table this rate is compared with the corresponding rates for England and Wales :—

	Diarrhœa death-rate per 1,000 births
England and Wales	23.41
96 Great Towns	29.33
145 Smaller Towns	24.73
England and Wales, less 241 Towns	14.39
Shrewsbury	**17.88**

The rate for Shrewsbury, it will be seen, is much below both that for England and Wales, and for the Smaller Towns with which Shrewsbury is comparable.

The following table gives the number of deaths from diarrhœa occurring in each year and the death-rates per 1,000 persons living since 1897 :—

Year.	Number of Deaths.	Death-rate per 1,000 living.
1897	9	0.32
1898	23	0.81
1899	9	0.31
1900	15	0.52
1901	13	0.45
1902	9	0.31
1903	12	0.41
1904	29	1.00
1905	20	0.68
1906	14	0.47
1907	21	0.71
1908	13	0.43
1909	9	0.30
1910	4	0.13
1911	22	0.74
1912	3	0.10
1913	11	0.37

In spite of the very hot summer and autumn the rate for 1913 compares very favourably with previous years. There can be no question that the rate has been prevented from rising to the extent to which it did in previous hot years by the sanitary improvements accomplished in the town, by the supervision of the collection of refuse, and by the instruction given to mothers by the Health Visitors. Another factor contributing to the low death-rate from diarrhœa is the absence of privies and privy-middens in the town.

G.—MEANS FOR PREVENTING MORTALITY IN CHILDBIRTH AND IN INFANCY.

During the year there were 46 deaths of infants under one year. This number is two less than that for the year 1912, in which there were 48 deaths, yet the infant death-rate as calculated per 1,000 births is greater than in 1912, a result which is due to the greater number of births occurring in 1912 followed by a reduction in 1913.

The births registered during the year numbered 615, and taking the infant deaths as 46, the infant death-rate comes out at 74 per 1,000 births. There were three deaths of illegitimate children, and taking the illegitimate births as 48, an illegitimate death-rate of 62 per 1,000 illegitimate births is obtained, which is remarkably low.

The following table gives the infant mortality for Shrewsbury compared with that for England and Wales :—

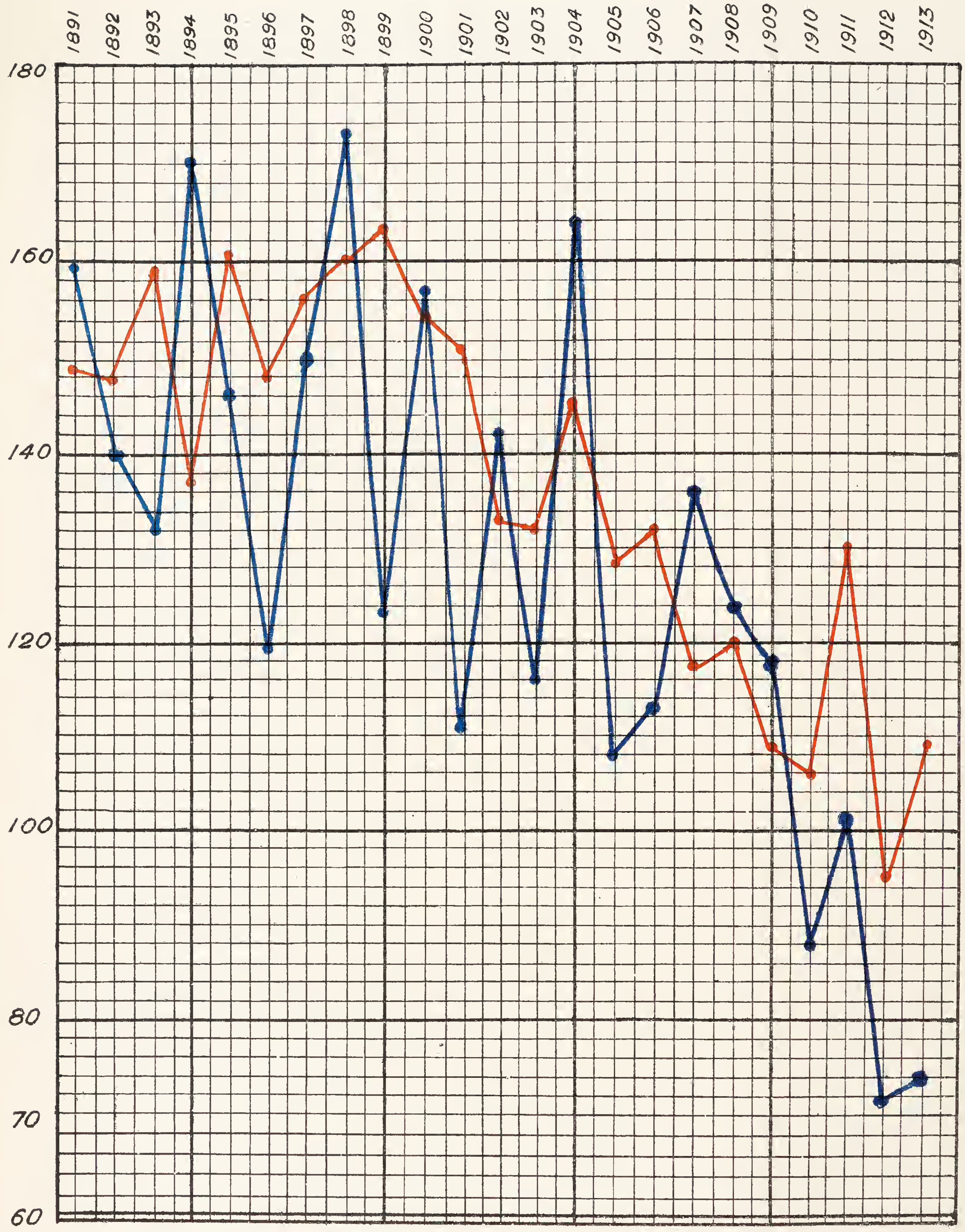
Infant Mortality Rate, 1913.

England and Wales	109
96 Great Towns	116
145 Small Towns	112
England and Wales, less the 241 Towns ...	96
Shrewsbury	74

This table shows that the infant death-rate for Shrewsbury is 35 less than that for England and Wales, and 38 less than the average for the Smaller Towns, with which Shrewsbury is comparable, and is even 22 less than the rate for rural England and Wales. Although in 1912 the rate for Shrewsbury was less than the rates mentioned the rate for 1913 shows a much greater difference.

The following table shows the infant mortality rates for Shrewsbury compared with those of England and Wales for the previous 23 years, and at the same time shows that the rate for 1913 is much lower than any previous year except 1912, when the rate was 72 per 1,000 births.

The chart which follows shows graphically the extent of the reduction in the rate in recent years.



INFANTILE MORTALITY RATES 1891-1913.

ENGLAND & WALES ——

SHREWSBURY ——

	SHREWSBURY.		ENGLAND & WALES.	
1891	159	149	149	151
1892	140		148	
1893	132		159	
1894	170		137	
1895	146		161	
1896	119	144	148	156
1897	150		156	
1898	173		160	
1899	123		163	
1900	157		154	
1901	111	128	151	138
1902	142		133	
1903	116		132	
1904	164		145	
1905	108		128	
1906	113	115	132	117
1907	136		118	
1908	123		120	
1909	118		109	
1910	88		106	
1911	101		130	
1912	72		95	
1913	74		109	

In the following table are set out the Infant Mortality rates in the four districts of the Borough compared with the birth-rate and general death-rate :—

	Whole Borough.	District I.	District II.	District III.	District IV.
Infant Mortality Rate	74	35	50	90	83
Birth-rate ...	20.7	15.9	20.8	19.8	24.9
Death-rate ...	13.1	12.4	16.6	13.0	12.8

The numbers under consideration in the different Wards are so small that little stress can be placed on the rates obtained from them.

The following table gives the principal causes of death among infants under 1 year, for the year 1913, and for the previous five years:—

	1908.	1909.	1910.	1911.	1912.	1913.
Diarrhœal Diseases ...	6	13	6	19	3	7
Premature Birth ...	10	17	7	9	11	6
Congenital Defects ...	6	1	4	1	—	1
Want of Breast Milk, Starvation ...	1	—	1	—	—	—
Atrophy Debility Marasmus	14	18	9	10	7	10
Tuberculous Disease ...	1	—	—	—	—	—
Syphilis	2	2	1	—	1	—
Rickets	—	—	—	—	—	—
Meningitis	1	—	1	—	—	—
Convulsions	11	7	9	8	6	9
Bronchitis	7	1	5	1	6	1
Pneumonia	11	9	6	3	3	4
Suffocation	2	—	—	—	—	—
Common Infectious Diseases	7	3	4	5	1	3
Other Causes	6	6	5	9	10	5
Total ...	85	77	58	65	48	46

The chief causes of death, it will be seen, were diarrhœal diseases, premature birth, atrophy, debility and marasmus, and convulsions.

Notification of Births Act, 1907.—The adoption of the Act in 1909 has been of the greatest value in giving early notification of births and enabling the health visitor to step in at an early stage and give instructions with regard to the care and feeding of the infants not under proper supervision.

During the year 614 births were notified, the number including 26 still-births. In 14 cases there was failure to notify under the Act, information being received at a later period through the Registrar's returns. In 1912 the failures numbered 18, so that the necessity of notifying has now become generally known. In a case of default, the parent is communicated with and an explanation asked. Ignorance of the Act is generally pleaded in each case, and if a doctor or nurse or both have been in attendance, they are both communicated with, and reminded of their responsibility. In some cases the failure to notify has resulted from the one depending on notification being made by the other person responsible.

The manner in which notifications of births were made is shown in the following table :—

Doctor.	Midwife or Nurse.	Doctor and Midwife.	Parent.	Doctor and Parent.	Registrar.
33	539	14	13	1	14

Total—614.

It will be seen that in 33 out of 614 cases, or 5 per cent, the doctor alone notified, and in 539 out of 614, or 88 per cent., the midwife or nurse notified. The practice is now almost general among medical men of asking the midwife or nurse to notify, thereby relieving themselves of responsibility.

Health Visitor's Work.—The chart indicating the infant death-rates for Shrewsbury in successive years shows strikingly the effect of the instruction given to mothers by the health visitors, who get early information of births through the Notification of Births Act, 1907. Since the adoption of the Act, and the appointment of a health visitor in 1909 the infant mortality has shown a progressive reduction and the reduction is all the more evident when the rate is compared with that for England and Wales.

In 1910 the infant death-rate for Shrewsbury was 18 less than that for England and Wales, in 1911 it was 29 less, in 1912 it was 23 less, and in 1913 it was 35 less than that for England and Wales. One cannot put the reduction in the mortality down entirely to the education through health visiting, as great sanitary improvements have been effected during these years, yet there can be little question of the great influence of health visiting in reducing the infant death-rate.

Of the 588 living births notified, 63 were not visited, although it was intended to visit 17 of these later. Thus 525 of the living births notified in the year, or 89 per cent., were visited at least once. Most of the infants receive a visit every three months, some are visited once a month, and where necessary some are visited weekly, especially where an infant requires special attention as regards feeding, or where the person in charge of an infant is evidently careless.

The visits were carried out by the health visitor, Miss Jesper, and by Miss Brett, school nurse, who in carrying out their duties act in co-operation. Return visits were also made by Mrs. Stocking, a voluntary whole-time health visitor, whose work in following up cases was especially valuable.

The following table summarises the work of the health visitor and school nurse :—

	Visits to Infants		Infant Deaths.	Still Births	
	First.	Return.	enquired into.	enquired into.	Total.
Jan. ...	57	123	4	3	187
Feb. ...	33	303	5	2	343
Mar. ...	50	201	4	4	259
April ...	37	439	2	3	481
May ...	44	235	6	3	288
June ...	36	267	2	0	305
July ...	62	210	2	1	275
Aug. ...	60	139	2	3	204
Sept. ...	46	469	1	2	518
Oct. ...	41	268	6	0	315
Nov. ...	38	181	1	2	222
Dec. ...	47	215	5	1	268
Total	551	3050	40	24	3665

In addition, from January to August, 1,435 return visits to infants were made by Mrs. Stocking. Therefore, 5,100 visits to infants were made by the staff during the year. One can recognise from these figures that the infants have been kept under close supervision, and the high figure in September indicates when the supervision was most necessary.

The following table indicates the method of feeding as ascertained on the first visits to infants :—

	Breast.	Breast & Bottle.	Artificial Food.	Bottle Fed.	Total ascertained.
Born in 1913	381	12	10	65	468
Percentage	82.4	2.6	2.1	13.9	

Thus, of 468 infants concerning whom particulars were clearly ascertained, 82.4 per cent. were found to be breast-fed on the occasion of the first visit, 2.6 per cent. both bottle-fed and breast-fed, 2.1 per cent. fed on artificial food, and 13.9 per cent. bottle-fed.

Some of those breast-fed on the first visit had a change later and the number of children and the length of time breast-fed were as follows :—

Total Children observed	2 weeks	3 weeks.	1 month	2 months	3 months	4 months	6 months	6 m'nths & over
381	3	1	5	4	6	6	1	355

Enquiries were made with regard to 44 of the 46 infant deaths and the method of feeding of these children is indicated below :—

	Breast fed.	Breast & Bottle-fed.	Bottle fed.	Artificial food.	Total.
Born in 1912	5	...	5	2	12
Born in 1913	15	2	14	1	32
	20	2	19	3	44

From this table it is evident that a large proportion of children dying were bottle-fed.

The health visitor also enquired into 26 still-births notified, the causes of which are extremely difficult to ascertain. However, the opportunity is taken in such cases to give advice to the mother as to the care to be taken of her health during the period of child-bearing.

School for Mothers' Committee.—In previous reports the excellent work done by this Committee, which was formerly called the Health Visiting Society, was commented upon. The work of the Committee now consists in conducting the School for Mothers in association with the Public Health Department, in managing sand-gardens for children in different parts of the town, in providing help for weakly children whose parents are in poor circumstances and in organising a Baby Show annually.

The School for Mothers alone calls for comment at the present juncture. Meetings are held once a week in the afternoon, and at these are present both the school nurse and health visitor, who act as organisers, and who weigh the children and give instructions to mothers with regard to the care and feeding both of children under one year of age and those over. Demonstrations are also given relative to the making of clothing and the cooking of food for families, special directions as to the preparation of cheap meals being given. The aim of this instruction is to reach not only the infants but the older children not subject to inspection at school. These meetings are very popular, and are attended each week by between 50 and 60 mothers, with their infants and children too young to attend school. The practice of weighing is encouraged, and during the year 835 weighings were carried out. Undoubtedly the School for Mothers is of great educative value to the mothers, and the interest taken by them in the demonstrations is a clear indication of their appreciation.

H.—VITAL STATISTICS.

Births.

The births registered in the Borough during the year amounted to 607, to which must be added 8 births of " residents " born outside the district, all in the Workhouse, making a total of 615 births to be assigned to the Borough. This number gives a birth-rate of 20.7 per 1,000 of population, a decrease of 1.8 on the previous year, and a decrease of 1.1 on the year 1911. The year 1912 was an unusual one, inasmuch as the rate was higher than in any year since 1908. One would almost expect the year 1913 to show a decrease after the increase in the previous year.

The following table shows the difference between the birth-rate for Shrewsbury and the average for the Great Towns, the Smaller Towns, and England and Wales generally :—

	Birth-rate.
England and Wales	23.9
96 Great Towns	25.1
145 Smaller Towns	23.9
England & Wales, less the 241 Towns ...	22.2
SHREWSBURY	20.7

It is seen in this table that Shrewsbury is 3.2 below the average for England and Wales, and also 3.2 below the average for the smaller towns with which it is comparable.

The following table gives the birth-rates of Shrewsbury for the last 22 years :—

Year.	Birth-rate.	England and Wales.
1892	25.6	30.5
1893	26.3	30.8
1894	28.3	29.6
1895	27.1	30.3
1896	27.6	29.7
1897	29.2	29.7
1898	25.7	29.4
1899	27.8	29.3
1900	24.5	28.9
1901	26.8	28.5
1902	25.1	28.6
1903	25.4	28.4
1904	25.8	27.9
1905	23.8	27.2
1906	23.3	27.0
1907	23.8	26.2
1908	23.2	26.5
1909	21.7	25.6
1910	21.8	24.8
1911	21.8	24.4
1912	22.5	23.8
1913	20.7	23.9

The births registered consisted of 308 males and 307 females.

The distribution of the births in the various districts is indicated in the following table, which also indicates the population and birth-rates in these areas :—

	Whole Borough	District I.	District II.	District III.	District IV.
Population	29,627	5,325	3,846	10,575	9,643
Males Females	308 307	47 38	40 40	110 99	111 130
Total	615	85	80	209	241
Birth-rate	20.7	15.9	20.8	19.8	24.9

Illegitimate Births.—There were registered in the Borough 41 illegitimate births, to which have to be added seven others registered as having taken place in Atcham Workhouse, making a total of 48 illegitimate births. This number gives an illegitimate birth-rate of 1.6 per 1,000 of population, and 7.8 per cent. of total births.

The rate for 1913 is unusually high, but it is difficult to say what factors influence the rate, which seems to have been increasing in recent years. In the following table are represented the illegitimate birth-rates for the last four years :—

	Total illegitimate births.	Percentage of total births.	Rate per 1,000 population.
1910	26	3.9	0.86
1911	32	4.9	1.1
1912	45	6.7	1.5
1913	48	7.8	1.6

Deaths.

During the year there were registered in the Borough 410 deaths, 91 of these having occurred in Public Institutions in the district, namely, the Salop Infirmary, the Eye, Ear and Throat Hospital, and the Borough Sanatorium. There were 72 deaths of "non-residents" in the district which must be subtracted from, and 53 deaths of "residents" dying outside the district which must be added to the total deaths. This gives 391 as the number of deaths assignable to Shrewsbury.

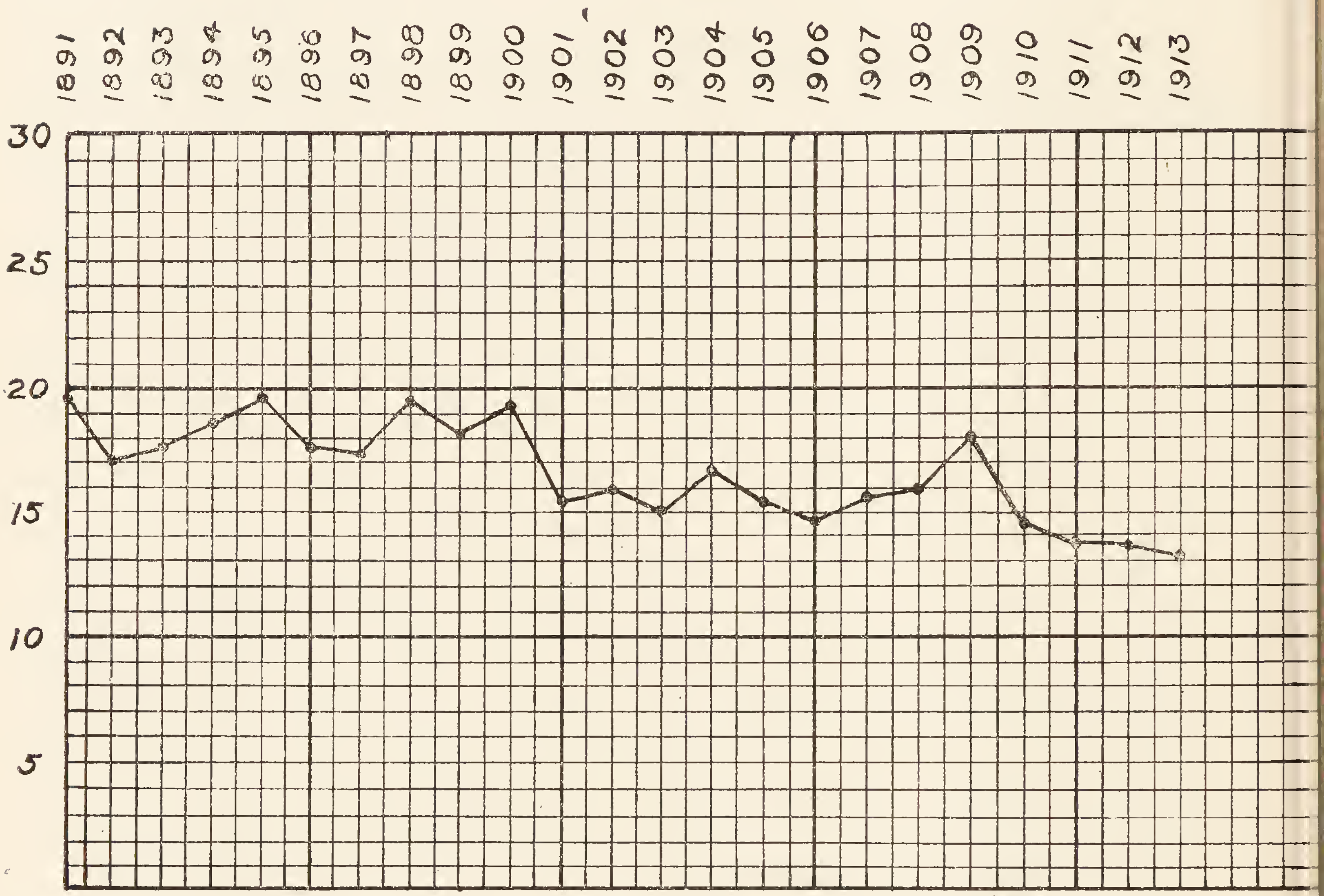
Total deaths registered in Shrewsbury	410
Total deaths in Public Institutions in the district	91
Deaths of "non-residents" registered in the district	72
Deaths of "residents" in Public Institutions outside the district :—	
Atcham Workhouse	37
Bicton Asylum	6
Other deaths of "residents" outside the district	10
Nett deaths belonging to Borough ...	391

Taking 29,627 as the population at the middle of the year this number, 391, gives a death-rate of 13.1 per 1,000 persons. This rate is .6 per 1,000 less than the previous year and is the lowest death-rate yet recorded.

The following table gives the population, number of deaths, and death-rate for each of the previous ten years compared with the year 1913 :—

Year.	Population.	No. of Deaths	Death-rate.
1902	28,590	462	16.0
1903	28,766	438	15.1
1904	28,957	489	16.7
1905	29,111	449	15.3
1906	29,288	433	14.7
1907	29,469	469	15.7
1908	29,653	476	15.9
1909	29,840	542	18.1
1910	30,032	436	14.5
1911	29,414	408	13.8
1912	29,521	407	13.7
1913	29,627	391	13.1

The chart appended graphically indicates the death-rate for the last 23 years :—



SHREWSBURY DEATH RATES FOR 23 YEARS.

The *corrected* death-rate, which is obtained by multiplying the nett deaths by the factor for correction is 12.3 per 1,000 persons. The corrected death-rate is obtained by multiplying the nett death-rate by the factor for correction, which is a figure calculated for each district from the number of persons at various ages arranged according to sex. As the death-rate in any district varies according to the age and sex distribution of the population it is necessary to calculate the factor for correction, and thus the corrected death-rate, which is then comparable with the corrected death-rates of other districts. This is rendered necessary on account of the influence which a large number of young persons or of old persons has on the nett death-rate.

In the following table the corrected death-rate for Shrewsbury is compared with the corrected death-rates of England and Wales and of the Great and Smaller Towns :—

Death-rate (corrected)	SHREWSBURY	...	12.3
,, ,,	England and Wales	...	13.4
,, ,,	96 Great Towns	...	14.7
,, ,,	145 Smaller Towns	...	13.0
,, ,,	England and Wales less 241 Towns	...	12.1

The corrected death-rate for Shrewsbury is .7 less than the average for the 145 Smaller Towns. In 1912 it was .2 less than the average for the Smaller Towns.

The following table gives the death-rates and birth-rates in the various districts within the Borough :—

District.	Population.	Deaths.	Death-rate.	Birth-rate.
District I	5325	66	12.4	15.9
,, II	3846	64	16.6	20.8
,, III	10575	138	13.0	19.8
,, IV	9643	123	12.8	24.9

Inquests. The inquests held in the Borough numbered 29, two being of children under one year, two of children between one year and 5 years, and 25 over 5 years of age.

The causes of death were as follows :—

Under 1 year of age :—

Convulsions	1
Natural causes	1

Under 5 years and over 1 year :—

Natural causes	2

Over 5 years :—

Accidents	4
Misadventure by chloroform ...	1
Shock during operation	1
Natural causes	9
Suicide	3
Accidentally drowned	1
Diphtheria	1
Chronic bronchitis	1
Accidental suffocation	1
Found drowned	1
Shock consequent on burns ...	2

Uncertified Deaths.—Five deaths were uncertified as follows :—

Cancer of brain	69 years
Bronchitis	86 years
Cerebral Haemorrhage ...	69 years
Senile Decay	82 years
Convulsions	9 months

THOMAS ORR, M.D. D.Sc.

TABLE I.—VITAL STATISTICS OF WHOLE DISTRICT DURING 1913 AND PREVIOUS YEARS.

YEAR.	Population estimated to middle of each year.	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS.		NETT DEATHS BELONGING TO THE DISTRICT.			
		Un-corrected Number.	Nett.						Under 1 Year of Age.		At all Ages.	
			Number.	Rate.	Number.	RATE.	of Non-residents registered in the District.	of Residents not registered in the District.	Number.	Rate per 1,000 Nett Births.	Number.	Rate.
1	2	3	4	5	6	7	8	3	10	11	12	13
1908	29653	...	688	23.2	476	16.0	51	50	85	123	476	15.9
1909	29840	...	649	21.7	556	18.6	88	74	77	118	542	18.1
1910	30032	...	655	21.8	455	15.1	75	56	58	88.5	436	14.5
1911	29414	631	643	21.8	425	14.4	54	37	65	101.1	408	13.8
1912	29521	652	667	22.5	416	14.0	64	55	48	72	407	13.7
1913	29627	607	615	20.7	410	13.8	72	53	46	74.7	391	13.1

Area of District in acres (land and inland water), 3525. Total population at all ages, 29389. } Census.
Number of Inhabited Houses, 6619. Average number of Persons per house, 4.4. } 1911.

Table II.—Cases of Infectious Disease notified during the Year 1913.

NOTIFIABLE DISEASE.	NUMBER OF CASES NOTIFIED.								TOTAL CASES NOTIFIED IN EACH LOCALITY. (*e.g.* Parish or Ward) of the District.				Total Cases removed to Hospital
	AT ALL AGES.	At Ages—Years.											
		Under 1	1 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 and upwards.	1	2	3	4	
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera, Plague	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup)	110	...	24	67	11	7	1	...	12	11	18	69	92
Erysipelas	9	...	...	1	...	4	3	1	4	...	4	1	...
Scarlet Fever	85	...	22	56	6	1	...	...	13	10	45	17	79
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	2	...	...	...	...	1	1	...	2	...	...	...	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-spinal Meningitis ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poliomyelitis	1	...	...	1	...	...	...	...	...	...	1	...	...
Pulmonary Tuberculosis ...	35	...	...	5	6	19	4	1	6	4	13	12	...
Other Forms of Tuberculosis	25	...	1	12	5	5	2	...	1	4	10	10	...
Ophthalmia Neonatorum ...	6	6	...	...	...	...	...	...	1	1	2	2	...
Totals	273	6	47	142	28	37	11	2	39	30	93	111	171

Isolation Hospital—Monkmoor Sanatorium, situated within the District. Two diseases treated.

TABLE III.—CAUSES OF, AND AGES AT DEATH DURING THE YEAR 1913.

CAUSES OF DEATH.	NETT DEATHS AT THE SUBJOINED AGES OF "RESIDENTS" WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT.									TOTAL DEATHS WHETHER OF "RESIDENTS" OR "NON-RESIDENTS" IN INSTITUTIONS IN THE DISTRICT.
	ALL AGES.	Under 1 year.	1 & under 2 years.	2 & under 5 years.	5 & under 15 years.	15 & under 25 years.	25 & under 45 years.	45 & under 65 years.	65 and upwards.	
1	2	3	4	5	6	7	8	9	10	11
All causes: Certified ...	386	45	10	15	19	12	55	87	143	...
All causes: Uncertified	5	1	...	...	...	...	...	...	4	...
Enteric Fever	...	...	...	...	...	...	...	...	...	1
Small-Pox	...	...	...	...	...	...	...	...	...	...
Measles	2	1	...	1	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	1
Whooping Cough	3	2	1	...	...	...	...	...	...	...
Diphtheria and Croup ...	16	...	...	5	10	1	...	...	...	12
Influenza	5	...	...	...	...	1	1	...	3	...
Erysipelas	...	...	...	...	...	...	...	...	...	...
Phthisis (Pulmonary Tuberculosis)	23	...	...	...	1	1	11	7	3	1
Tuberculous Meningitis ...	2	...	...	1	...	...	1	...	...	1
Other Tuberculous diseases	3	...	1	...	1	...	1	...	...	3
Cancer, malignant disease ...	46	...	...	...	...	...	3	25	18	11
Rheumatic Fever	...	...	...	...	...	...	...	...	...	...
Meningitis	...	...	...	...	...	...	...	...	...	...
Organic Heart Disease ...	34	...	...	...	1	2	3	9	19	7
Bronchitis	41	1	1	1	...	...	1	8	29	1
Pneumonia (all forms) ...	26	4	6	3	2	1	3	3	4	2
Other disease of Respiratory organs	5	...	...	...	...	...	1	2	2	4
Diarrhœa and Enteritis ...	12	10	1	...	...	...	1	...	...	1
Appendicitis & Typhlitis ...	2	...	...	...	...	...	1	1	...	6
Cirrhosis of Liver	3	...	...	...	...	...	1	1	1	...
Alcoholism	1	...	...	...	...	...	...	1	...	...
Nephritis and Bright's Disease	12	...	...	...	...	1	2	4	5	1
Puerperal Fever	...	...	...	...	...	...	...	...	...	...
Other accidents & diseases of Pregnancy and Parturition	2	...	...	...	...	1	1	...	...	1
Congenital Debility and Malformation, including Premature Birth ...	17	17	...	...	...	...	...	...	...	4
Violent Deaths, excluding Suicide	10	...	...	1	...	2	5	1	1	6
Suicide	3	...	...	...	...	...	2	1	...	...
Other Defined Diseases ...	123	11	...	3	4	2	17	24	62	28
Diseases ill-defined or unknown	...	...	...	...	...	...	...	...	...	...
	391	46	10	15	19	12	55	87	147	91

TABLE IV.—INFANT MORTALITY DURING THE YEAR 1913.

Nett Deaths from stated causes at various Ages under 1 Year of Age.

CAUSE OF DEATH.	Under 1 week.	1-2 weeks.	2-3 weeks.	3-4 weeks.	Total under 4 weeks.	4 weeks and under 3 months.	3 months and under 6 months.	6 months and under 9 months.	9 months and under 12 months.	Total Deaths under 1 year.
ALL CAUSES { Certified	8	4	4	2	18	8	7	8	4	45
ALL CAUSES { Uncertified ...	...	...	...	...	...	...	...	...	1	1
Small-pox	...	...	...	...	...	...	...	...	...	...
Chicken-pox	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	1	1
Scarlet Fever	...	...	...	...	...	...	...	...	...	...
Whooping-Cough	...	...	...	...	...	...	1	...	1	2
Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases ...	...	...	...	...	...	...	...	...	...	...
Meningitis (*not Tuberculous*) ...	...	...	...	...	...	...	...	...	...	...
Convulsions	1	1	1	...	3	2	1	1	2	9
Laryngitis	...	...	...	...	...	...	...	...	...	...
Bronchitis	...	...	...	...	...	...	...	1	...	1
Pneumonia (all forms)	...	...	...	...	...	1	...	3	...	4
Diarrhœa	...	...	...	...	...	1	1	...	...	2
Enteritis	...	...	...	...	...	...	2	2	1	5
Gastritis	...	1	...	...	1	2	...	...	...	3
Syphilis	...	...	...	...	...	...	...	...	...	...
Rickets	...	...	...	...	...	...	...	...	...	...
Suffocation, overlying	...	...	...	...	...	...	...	...	...	...
Injury at Birth	...	...	...	...	...	...	...	...	...	...
Atelectasis	...	...	...	...	...	...	...	...	...	...
Congenital Malformations ...	...	...	1	...	1	...	...	...	...	1
Premature Birth	3	1	1	...	5	1	...	...	...	6
Atrophy, Debility & Marasmus ...	4	1	1	1	7	1	2	...	...	10
Other Causes	...	...	...	1	1	...	...	1	...	2
	8	4	4	2	18	8	7	8	5	46

Nett Births in the year :—		Nett Deaths in the year of :—	
Legitimate ...	566	Legitimate Infants	43
Illegitimate ...	48	Illegitimate Infants	3

REPORT

OF THE

School Medical Officer,

1913.

Borough Health Offices,
9 Swan Hill,
Shrewsbury,
13*th May*, 1914.

Mr. Chairman, Ladies and Gentlemen,

I have the honour to submit to you my Annual Report on the medical inspection of school children and on my work generally as School Medical Officer.

The Report demonstrates the large number of school children found defective on medical inspection, but it also indicates the very satisfactory steps taken to secure treatment for such children and the general amelioration of their condition.

Several matters require the consideration of the Committee, namely, the feeding of necessitous children, concerning which I offer suggestions in the body of the Report, the provision of drinking water in the playgrounds of all the schools, and the improvement of the sanitary conveniences.

In submitting this Report I wish to express my appreciation of the work of the School Nurse, Miss Brett, and my clerk, Mr. Birrell, who have been of great assistance to me in carrying out my duties.

I am, Ladies and Gentlemen,

Your obedient Servant,

THOMAS ORR.

General Review of the Hygienic Conditions Prevalent in the Schools.

There are fourteen public elementary schools under the control of the Education Committee. All except three, namely, Coleham Mixed, St. Michael's Mixed, and St. George's Boys' Schools, are of old construction, while only one of the three mentioned is constructed on modern lines, having been erected in 1909 and completed in 1910.

With the exception of St. Chad's School all have good surroundings and are not closely encircled by buildings. St. Chad's School is shut in on all sides by houses of a very poor class, while in two sets of premises within 15 yards of the school the trade of rag and bone-dealer is carried on. On one side of the school, houses are built up against the school walls, rendering it impossible to get sufficient light and ventilation to two of the class-rooms in the Boys' Section.

During the year a complete survey of all the schools was made by the Inspector of Nuisances, plans being made where necessary, and the drains of all being tested. Records have been made of the findings, and these will be kept for future reference, improvements being noted as they are completed.

Ventilation and Lighting.—The schools as a whole are well lighted and ventilated. The three schools that need attention in this direction are St. Chad's Boys', All Saints' Boys, and St. Mary's Infants'. The windows in two of the rooms in St. Chad's Boys' School are placed on one side of the building only, no openings being provided on the other side for ventilation. The construction of the windows is bad, owing to their being crossed by heavy stone mullions, which throw large shadows across the room and block out the light.

At All Saints' Boys' School the two large rooms are lighted and ventilated by means of one window in each end, and one in the front of the building. It would be a great improvement if windows were put in the back wall, as in the girls' school, or a lantern light placed in the roof.

The other school with defective lighting is St. Mary's Infants'. The class-room is lighted by windows at one end and side only. The difficulty here may be overcome by a lantern light in the roof. A great improvement was effected during the year in the lighting of Wyle Cop Infants' School, where the windows at the end of the main room were lowered.

In only one school, Coleham Mixed School, is electricity utilised for illumination purposes. In nearly all the other schools gas is used with ordinary fish-tail burners. An improvement would be effected if incandescent burners were substituted for the ordinary burners.

Warming.—In nine schools the only means of heating is by open fires, and in the case of large rooms this is inadequate. In the five other schools ample means of heating is provided by hot water pipes and radiators.

Cloak-rooms.—Ample cloak-room accommodation is provided for all the schools, and is generally situated in the entrance hall, or in a small room off the entrance corridor. The latter method is better, as it affords means of lighting and ventilation, which are so essential. In four instances the cloak-rooms can only ventilate into the school-rooms, and in wet weather the air polluted from the damp clothes is likely to pass into the school. This occurrence can be obviated by arranging the windows so that a current of air may pass direct across the cloak-room.

In only one case was an insufficient number of pegs provided, namely, St. Chad's Boys'. In this cloak-room practically all the pegs were broken off.

Coleham Council School is the only one in which means are provided for drying children's clothes. Here hot water pipes are arranged under each row of pegs in the cloak-room.

Sanitary Conveniences.—Nine of the schools are provided with trough closets, which are flushed by means of a single automatic flushing tank at one end. In every case, although they appeared clean, they were foul-smelling. In five schools wash-down pedestal water closets, each flushed by a separate three-gallon flushing cistern, are provided, and are in good condition. During the year the trough water-closets at the Lancasterian and St. Michael's Infants' Schools were replaced by pedestal water closets with proper flushing cisterns. The drainage of St. Chad's Boys' School was also thoroughly overhauled in the middle of the year.

The urinals are generally constructed of cement with slate partitions, or wholly of glazed bricks. In some cases the water does not flush the back of the urinal and only flows along the glazed channel. The condition of the urinals on the whole is good.

At five schools no separate water closet or lavatory accommodation is provided for the use of the teachers.

Lavatory Accommodation.—Where washing accommodation is provided it is generally to be found in the cloak-rooms. In the 30 departments, only 17 were found to have proper lavatory basins, and in one or two cases these were insufficient in number. Five schools were found to have only enamelled iron bowls and six infants' schools were found to be entirely without means of washing. This is a condition of things which demands early remedy.

Water Supply.—In only four schools is there a proper supply of drinking water provided for the scholars, namely, Coleham Mixed, Lancasterian, St. Mary's and Wyle Cop Schools. In four instances the " conduit " is situated outside the entrance to the playground, but in most cases it is some distance from the school, and has to be brought into the school in jugs or cans. In previous reports the need for a supply of drinking water in the playgrounds was pointed out, and it is hoped that steps will be taken to provide all the schools in the town with " conduit " water during the present year.

Playgrounds.—Speaking generally, the condition of the playgrounds is very good. In only two cases were any defects apparent. A portion of the Abbey Boys' playground is not paved and is not self-cleansing, and in time of rain allows the water to remain on the yard and around the school. The lower portion of Ditherington Boys' playground is low lying, and at the time of visiting a large quantity of water was standing on this portion of the yard. In two schools the area of the playground is insufficient for the number of scholars.

Cleanliness.—The condition of the walls and ceilings in the various schools is good. In one or two cases there is need for attention, but these will be dealt with by the Managers at an early date.

The floors are in some cases old and rough, and render proper cleansing a difficult operation. The caretakers, however, seem generally to take greater pains than formerly in keeping the schools clean. In only one case was it necessary to draw the caretaker's attention to the uncleanly state of the sanitary conveniences, and this was immediately remedied.

School Desks.—Coleham Mixed and St. Michael's Mixed Schools are the only schools where suitable desks with back-rests and tip-up seats are provided throughout for each class. In other schools only a few classes have proper desks, and in most cases the desks are very old and unsuitable. These old desks should be replaced by those of suitable construction whenever an opportunity offers.

In every school, where possible, the desks have been so arranged that the light falls from the side on to the books of the scholars.

Co-relation of School Medical Service and Public Health Service.

The School Medical Officer also acts as Medical Officer of Health. He personally conducts the routine inspection of the school children. In carrying out the medical inspection of the children the plan has been adopted of examining the age-13 group in September and October each year, so as to include all children before they leave school, and the age-5 group in March and April so as to have most of those children admitted during the Code year examined before the end of that year. It is found that this arrangement is a very convenient one, as at these times the School Medical Officer is able to devote undivided attention to that part of his duties. Apart from the visits to the schools in connexion with the routine inspection, the School Medical Officer is frequently visiting them to investigate outbreaks of infectious disease and often to inspect the school buildings.

Owing to the great increase of home-visiting in connexion with school children and on account of the institution of the dental clinic the Council decided that Miss Brett should devote her whole time to the duties of School Nurse. It must be stated, however, that the Health Visitor acts in close co-operation with the School Nurse, and during the prevalence of infectious disease in the schools both these ladies visit the homes of the children and generally act together.

Assistance of School Nurse, Teachers and Attendance Officer.

The School Nurse is not present at the inspection of the children, it being considered advisable for her to devote all her time to outside work, visiting the children found defective on inspection or visiting absentees. By such visits she is often able to obtain particulars regarding children examined, but concerning whom the parents have not supplied sufficient information. The School Nurse is also able to visit defective children at an earlier date than she could do if she spent her time assisting at the inspection of the children in the school, and early visits are highly desirable in the case of a large number of defective children.

Much assistance is rendered by the teachers, in the first place by weighing and measuring the children and entering up the cards ; in the work of measuring and weighing the teachers replace the School Nurse, who is thus able to devote more time to visiting the homes of the children. Secondly, by their presence at the actual inspection the teachers render considerable assistance for the children are much less likely to be nervous when the teachers are present than they would be if only the School Nurse were present with the School Medical Officer. Thirdly, they are frequently able to give very necessary information regarding children, especially as regards the home conditions, the usual conditions with respect to cleanliness and sufficiency of clothing of the children and the illnesses from which the child may have suffered. The presence of the teachers and the weighing and measuring gives them an interest, and, one may say, a very necessary interest, in the health of the children. They become aware of the condition of the health of the children, and are able to devote care to their physical as well as educational well-being, and they are often able to bring pressure to bear on the parents to have the children properly cleansed or clothed or otherwise attended to. Appearances point every year to the greater interest taken by the teachers in the physical well-being of the children, an interest which is absolutely essential if education is to have its greatest effect. Further, the teachers receive instructions from the School Medical Officer regarding the care of certain children found defective, such as cases of defective eyesight with regard to their position near the blackboard, cases of defective hearing as to their proximity to the teachers, and cases of heart disease as to suitable physical exercise. Another way in which the teachers assist the School Medical Officer is in dealing with outbreaks of infectious disease, but this assistance will be considered later when dealing with the control of infectious diseases.

As regards the help rendered by the School Attendance Officer, this has been very great, in fact, during the year under review through many changes in administration his work has been greatly added to and his intimate co-operation has now made him part of the School Medical Service.

There are different ways in which the Attendance Officer assists the School Medical Officer. The first is in dealing with special cases, such as mental defectives, children absent through ringworm or scabies or other conditions requiring attention. He requests the parents of such children to bring them to the School Medical Officer to be examined, and when they refuse he reports to the School Medical Officer to get further instructions regarding the cases. Secondly, in obtaining medical treatment for defective children or in securing the cleanliness of verminous children he renders great assistance, for when the parents fail to fulfil their duty with respect to the children, by his visits and threats of prosecution he often attains the object in view. Lastly, in the control of infectious disease his co-operation is of the greatest value, since he reports at once suspicious cases of infectious disease, both in school children and in those not attending school, and during an outbreak, in times of stress, he assists the School Nurse in giving instructions to the parents as to the children to be excluded from school and the duration of their exclusion in accordance with the directions issued by the School Medical Officer.

Presence of Parents at the Examination.

If school medical inspection is to have its greatest influence on the health of the children, it is necessary for the parents to be deeply interested in the actual inspection. By the presence of the parents one is able to obtain information regarding the previous history of the children, what general as well as infectious diseases they have had, whether they have had rheumatism or epilepsy, or if there is any predisposition to certain diseases in the family. Such information can only with difficulty be obtained by secondary means, such as through the teacher or by means of the forms filled in by the parents, and then the information is likely to be more or less inaccurate. Again, their presence facilitates the giving of instructions as regards the care of the children and at the same time the School Medical Officer is better able to impress upon the parents the need for treatment where necessary. As so few mothers follow industrial employment one would expect a greater number to be present at the inspection.

Every effort is made to encourage parents to be present at the inspection of their children, and some degree of success has been attained as regards the age-13 group, but, as regards the age-5 group, the number of parents attending is practically the same as in 1912. With children 5 years of age, 40.7 per cent. were accompanied by their mothers, and with those 13 years of age, 23 per cent. With males and females in the former group the percentages of mothers present were nearly equal, being 39.5 and 41.9 respectively, but with the latter group, the percentages were 20.3 and 25.8 per cent. respectively. One expects a greater number of mothers to be present with the members of the younger group, but even in that group one would expect a much greater number to be present.

Where the parents have not been present at the inspection greater attention is devoted by the School Nurse at the homes, both in giving advice regarding the care of the children, including the necessity for treatment when required, and also in the general care of the home. It is usually where the parents neglect to come to the inspection that advice is most necessary at their homes.

Disturbance of School Arrangements by the Inspection.

In only four schools is a room suitable for medical inspection available. At the other schools there is, however, little disturbance of school arrangements since a class-room can be readily vacated and given up for the one or at most two days on which the inspection is carried out. Two classes can be readily combined or one class may be taught in the open air, or, as often happens, a school-room may be made available by a class or classes having their physical drill in the playground while medical inspection is going on. At any rate the disturbance, if any, is scarcely appreciable, and certainly the occasion of medical inspection is one of relief to the teachers from the monotony of their every-day occupation.

General Statement of the Extent and Scope of the Medical Inspection carried out during the year.

The Local Education Authority has under its control fourteen Public Elementary Schools, these forming 30 departments.

In the following table is set out the average number of children on the rolls of the various Schools :—

	Boys.	Girls.	Infants.	Mixed.	Total
Abbey	144	123	80	—	347
All Saints	122	133	144	—	399
Cherry Orchard ...	—	—	55	—	55
Coleham	263	248	204	—	715
Coton Hill	—	—	62	—	62
Ditherington	—	—	96	—	96
Lancasterian	—	—	131	464	595
St. Chad's	139	145	151	—	435
St. George's	160	125	168	—	453
St. Giles'	—	—	—	133	133
St. Mary's R.C. ...	—	—	109	122	231
St. Michael's	277	264	133	—	674
Wyle Cop	160	125	168	—	453
				Total	4648

The average attendance during the year was 4,049, which, taken with the children on the rolls, 4,648, gives an average attendance of 87.1 per cent.

The children inspected were the two groups "entrants" and "leavers," as required by the Code of Regulations issued by the Board of Education. "Entrants" are children admitted to school for the first time and are also called the age-5 group, while "leavers" are children who are about to leave school, and who are 13 years of age, or who will be 13 before the date of the next inspection, also called the age-13 group. The former group includes a large number of children under 5 years of age and a few between 6 and 7 years of age, while the latter group includes a few children 14 years of age who have not been previously examined.

The following table gives the total number of children inspected in each School :—

	Age-5 Group.			Age-13 Group.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.
Abbey	16	19	35	19	20	39
All Saints'	30	34	64	19	16	35
Cherry Orchard ...	9	11	20	—	—	—
Coton Hill	16	19	35	—	—	—
Ditherington	17	7	24	—	—	—
Coleham...	—	—	—	44	38	82
Lancasterian	20	23	43	34	37	71
St. Chad's	21	29	50	26	26	52
St. George's	34	37	71	21	14	35
St. Giles'	15	13	28	—	12	12
St. Mary's R.C. ...	24	8	32	8	10	18
St. Michael s	21	23	44	47	36	83
Trinity	17	30	47	—	—	—
Wyle Cop	26	19	45	28	27	55
	266	272	538	246	236	482

Total examined (all ages), 1,020.

The number of children examined exceeds that of the previous year by 249, the age-5 group being 202 more and the age-13 group 47 more than in 1912. This increase in the age-5 group was due to the fact that all children admitted to the Infants' Schools irrespective of their age were submitted for examination, it being considered advisable to determine if any defect required attention before the child was more than a year in school, a procedure which is very necessary where many children 3 and 4 years of age are admitted.

The visits paid to schools in connexion with school medical inspection numbered 59, 27 to mixed schools and 32 to infants' schools. The hours spent in inspecting the infants were 54¼, and the age-13 group 51½, which give averages of 6 and 6.4 minutes per child respectively. The time is that which is spent in inspection and in entering the results of inspection on the record cards and does not include that devoted to making out notices to parents or exclusion forms. Further, it does not include the weighing and measuring of the children, which is done by the teachers previous to the visit of the School Medical Officer

Non-Routine Cases.—By " non-routine " cases are understood those children not included in the age-5 or age-13 group under inspection, but those submitted by the teacher for examination by the School Medical Officer on the occasion of his visit. These are children who have been noted by the teacher to have some defective condition not being attended to or which it is advisable should be brought to the notice of the School Medical Officer. Seventeen cases were submitted for examination in this way, 6 were cases suspected of having defective eyesight, 2 mental defectives, 3 adenoids, one scabies, one impetigo of face, one phthisis, and 3 others. This number is smaller than what one would expect under ordinary circumstances, but it has to be noted that teachers may send cases at any time to the School Medical Officer at his office for examination.

Statement of Number of Children concerning whom Notices were sent to the Parents.

The following is a classified list of the number of defects found, concerning which notices were sent to parents advising treatment :—

	Boys. age-5.	Girls. age-5.	Boys. age-13.	Girls. age-13.
Teeth	45	47	20	15
Tonsils	38	46	32	27
Eyesight	—	—	35	62
External Eye Diseases...	6	1	2	3
Adenoids	5	1	—	2
Phthisis	9	6	7	2
Phthisis (suspicious) ...	—	2	1	—
Anæmia	4	5	13	14
Deafness	4	4	6	7
Ear Disease	5	4	2	2
Nasal Discharge ...	4	2	—	—
Nasal Obstruction ...	1	—	—	—
Bronchitis	1	3	2	—
Heart Disease	—	2	3	5
Mentally Defective ...	—	1	1	—
Abscess of submaxillary gland	—	—	1	—
Vermin of body ...	3	5	6	6
Nits	—	4	—	18
Scabies	—	2	2	1
Impetigo of face ...	—	—	—	1
Total Defects	125	135	133	165

Total Notices to Parents :—

Written	45	50	74	89
Verbal	47	49	27	26

The total defects among the age-5 group numbered 260 and among the age-13 group 298, or a grand total of 558 for both groups. It must be recognised, however, that there is a difference between defects and defective children. Although 558 defects were noted, only 407 children were concerned. In the age-13 group, 4 children had four defects, 8 had three defects, 39 had two defects, and the remainder one defect ; while in the age-5 group, 2 had four defects, 11 had three defects, 23 had two defects and the remainder one defect.

The number of notices given to parents with regard to children were as indicated in the table, 407, or 40 per cent. of all children examined. As regards the age-5 group, 35 per cent. of the children required notices and as regards the age-13 group, 45 per cent. That a child was the subject of a notice did not mean that the child required medical attention, as his condition may have been due to neglect of the parents, for instance, verminous condition of the head or body. Of the notices, 258 were written which were sent through the teachers, and 149 verbal which were given usually to the mother when present at the examination of the children. The presence of the mother not only saves the trouble of writing out and forwarding a notice, but enables the School Medical Officer to impress upon the parent the importance of having the defect tended to or to give special directions as to the care of the child's health.

Of the 17 non-routine cases, notices were sent to the parents concerning 6 who had defective eyesight, 2 who were mentally defective, 3 who had adenoids, one chronic bronchitis, one phthisis, one bad teeth and enlarged tonsils, one scabies, and one impetigo of face. The two cases of mental defect were the subjects of special reports to the Education Committee.

Instructions were given to the teachers with regard to many of the children found defective. These instructions particularly concerned cases of defective eyesight, deafness and heart weakness ; the two first as regards their proximity to the blackboard or to the teacher, and the third as regards physical exercise. By the presence of the teacher at the examination of the children he obtains some information as to their defects and is able to assist the School Medical Officer in obtaining treatment and in seeing that treatment has been secured. If medical inspection is to have its full effect the teachers must take a deep interest in the health of the children and the information gained by them at the inspection gives the teachers such a knowledge of the defective conditions as to encourage them to impress upon the parents the necessity of treatment.

General Review of the facts disclosed by Medical Inspection.

Previous Illnesses.—The information regarding the infectious diseases from which the children have suffered must of necessity be obtained from the parents and although the exact year of attack may not be exactly given, yet for all practical purposes the information may be considered fairly accurate. When the parents are present at the inspection more reliable information can be obtained and their statements made on the form can be checked as well as other particulars elicited. It is the necessity for obtaining these accurate details which renders advisable the presence of the parents at the actual examination.

The following table gives the percentage of children in the two age-groups returned as having had the infectious diseases named :—

		Measles.	Whooping Cough.	Chicken Pox.	Scarlet Fever.	Diphtheria.
Girls age 5 group	Attacked over 5 ...	18.4	2.2	6.6	1.1	0.4
	Attacked under 5 ...	58.1	31.6	20.2	5.5	0.7
Attacked previous to examination		76.5	33.8	26.8	6.6	1.1
Boys age 5 group	Attacked over 5 ...	13.2	1.5	4.5	0.4	0.4
	Attacked under 5 ...	62.8	31.2	16.2	4.5	1.1
Attacked previous to examination		75.2	32.7	20.7	4.9	1.5
Girls age 13 group	Attacked over 5 ...	52.9	16.9	12.7	15.3	4.2
	Attacked under 5 ...	38.6	28.4	14.8	1.7	0.4
Attacked previous to examination		91.5	45.3	27.5	16.9	4.7

Boys age 13 group	Attacked over 5 ...	45.9	19.5	12.6	9.3	4.9
	Attacked under 5 ...	44.3	26.8	18.2	0.8	0.8
Attacked previous to examination		90.2	46.3	30.9	10.1	5.7

These figures possess a general resemblance to those for 1912, with the exception of those for measles, which in the age-5 group showed girls attacked to the extent of 43.3 per cent. and boys 29.6 per cent. in 1912, compared with 75.2 and 76.5 per cent. respectively in 1913. This difference is accounted for by the severe epidemic of measles which occurred towards the end of 1912. As regards measles in the age-13 group, it is interesting to note that the figures for 1912 and 1913 are very similar. In 1912 girls and boys who had been attacked by measles were respectively 91.9 and 84.0 per cent., and in 1913, 90.2 and 91.5 per cent. It would thus appear that approaching 90 per cent. of the children leaving the elementary schools have already had measles. One has ample evidence in the figures in the table of the great infectivity of measles compared with other infectious diseases. Roughly only one-half the number of children previously attacked by measles were attacked by whooping cough, and only one-third attacked by chicken-pox.

Clothing and Footgear.—In the following table the percentages of children with fair or poor clothing and footgear are represented :—

		Age-5 Group.			Age-13 Group.		
		Male.	Female.	Both Sexes.	Male.	Female.	Both Sexes.
Clothing.	Fair	9.0	8.1	8.5	12.1	7.2	9.7
	Poor	0.4	2.6	1.3	1.2	0.4	0.8
Footgear.	Fair	5.3	7.4	6.3	11.8	6.4	9.1
	Poor	2.3	2.9	2.6	2.0	1.7	1.9

These figures show a slight improvement on those of the previous year, when the figures as regards Fair and Poor Clothing and Fair and Poor Footgear were 10.8, 0.9, 9.4 and 2.1 respectively. They, however, do not represent the exact conditions under ordinary circumstances. Notice of the inspection makes the occasion an unusual one and stimulates the parent to mend or clean the clothing of the child previous to the day of inspection. The presence of flea bites with a clean shirt often gives the parents away. One sometimes finds a boy wearing the better clothes of an elder brother purposely for the examination. It is probable that were the inspection made without notice to the parents being given the percentages would be increased by about one-third, and this estimate is borne out by the observations of the teachers.

In the age-5 group the condition of the clothing of boys and girls appears to be about the same, but in the age-13 group girls appear to be better clothed than boys.

The average for the age-5 group as regards fair clothing is only slightly less than that for the age-13 group, while that for poor clothing in the age-5 group is greater than the age-13 group.

The standard of clothing is gauged not by its quality but by its condition as regards repair, sufficiency for warmth and cleanliness. The combination of bad repair and want of cleanliness is too frequent, and shows usually the general conditions of home life, dominated as they often are in such cases by thriftlessness, drunkenness and personal disrespect on the part of the parents.

The capacity of the footgear to exclude wet is the basis of its standard of sufficiency. The average for the age-5 group as regards fair footgear is less than the average for the age-13 group, but the average of the former is greater than that of the latter group as regards poor footgear. Again, the girls in the age-13 group appear better cared for than the boys in the same group.

During the year a Committee, known as the Children's Boot Fund Committee, was formed, chiefly as a result of the activity of the Attendance Officer, for the purpose of obtaining suitable boots for the children of poor people. This committee collected a sum of money for the purpose, and were able to render great assistance in providing suitable boots for the winter. The object was not to distribute them as charity, but to ask the parents to contribute as much as they could afford towards the cost, thus still keeping the parents cognisant of their responsibility.

The Committee supplied 180 pairs of boots, costing £40 17s. 2d., and towards this amount the parents contributed £8 3s. 6d., or almost exactly one-fifth of the total cost. Acting on the principle of teaching self-help, this Committee has done what might well be a beginning of much larger work in dealing with the feeding of poor children and in providing medical treatment, including spectacles, where necessary. One must not dispense charity indiscriminately, nor must the parents be relieved of their responsibilities. Efforts must be made to imbue them with the idea of self-help, with the necessity for thrift and abstention from alcohol.

NUTRITION.—The standard of nutrition is an arbitrary one and depends to a large extent on the views of the observer. Nevertheless, there are more or less recognised signs of poor nutrition which act as guides resulting in the determination of a practical standard. Dependence cannot be placed on weight alone nor on the relationship between height and weight. The general appearance of the child, the general dejected, unhappy countenance, the pale waxy and inelastic skin, the dull eyes with drooping eyelids all point to bad nutrition. It is more in determining the grades that the difficulty arises, but the naturally thin, wiry and energetic child should not be confused with the poorly nourished.

Poor nutrition was noted in 0.6 per cent. of the children in the age-5 group, and in 0.2 per cent. in the age-13 group, while fair nutrition was noted in 5.7 per cent. in the first group, and 13.7 per cent. in the second. The figures show, as those of 1912, that poor nutrition exists to a greater extent among the older group of children.

Malnutrition results from the influence of two important factors, the first, bad hygienic surroundings, and the second, unsuitable food. Included in the former are bad housing conditions, carelessness and neglect and often drunkenness of the parents. Poverty is frequently put forward as a cause, but it is not poverty alone, but thriftlessness and drunkenness of the parents which have their effect, and one often finds all these conditions associated.

As regards the subject of unsuitable food, one can say much. The women of the working-classes often show a surprising ignorance of the cooking of suitable foods for family requirements, a want of knowledge of the value and suitability of foodstuffs and too often a general incompetence respecting household management. One is inclined to put a good deal of this want of knowledge down to the absence of proper education with respect to these matters, and support of this view is afforded by the results from the education of mothers at the School for Mothers. Here they receive instruction in cooking cheap but nutritious and suitable meals for families, and in general house management. This instruction is received with the greatest interest and enthusiasm by the women concerned and undoubtedly much good results. But why should it be necessary to teach those women? Why do the girls not receive practical instruction which will be of value to them in after life, and avoid the necessity for giving such instruction possibly when much damage has been done through ignorance? Happily attempts are being now made to meet this defect. Miss Adcock, of the Shrewsbury Cookery Centre, now gives as part of the curriculum in cookery, instruction with regard to the cooking of cheap and suitable meals for families, particular attention being paid to the cost so as to come within the bounds of a working man's income. This instruction, combined with practical teaching of the proper choice of foods and the judicious purchase of them is of much greater value than instruction in making fancy cakes and other confections which are much beyond the reach of a working-man, except as a luxury on a rare occasion. Everyday needs should first be catered for.

No action has been taken to provide meals under the Education (Provision of Meals) Act, 1906, and during the year no meals were provided by voluntary agencies. Of those children examined, 101 were found to be poorly or fairly nourished, and, if one considers that those come from two age-groups only, one is bound to conclude that roughly 400 children in the schools are in such a serious condition as regards nutrition as to require consideration. The condition of all these does not result from bad or unsuitable food, but many of them certainly would benefit greatly by having at least one good meal a day, preferably the mid-day meal. A poorly nourished or badly fed child cannot receive the greatest or even a moderate amount of benefit from the education provided. A great part of the responsibility of rearing intelligent and healthy citizens rests indubitably with the municipality. An unhealthy and badly educated child becomes later a drag on the community, and it becomes a matter of the greatest importance to avoid such drags. If voluntary meals cannot be provided for such children it may be necessary for the Education Committee to deal with the question. Possibly it would be advisable for a voluntary committee such as that undertaking the provision of footgear for necessitous children to deal with the matter in the first place in a tentative way.

HEIGHT AND WEIGHT.—In the following tables the heights and weights of children examined are compared with the average heights and weights of children examined under similar circumstances in Urban Districts in England and Wales during 1909 and 1910 as collected by Drs. Tuxford and Glegg. These latter figures are perhaps more satisfactory for comparison than any others, as they are the result of the examination of a very large number of children examined during school medical inspection and thus under the same conditions.

BOYS—HEIGHT.

	SHREWSBURY.			England, Urban
Age.	No. Examined.	Height in ins.	Height in cms.	Height in cms.
3	33	36.5	92.7	93.1
4	94	39.1	99.3	97.7
5	111	41.0	104.1	102.7
6	38	42.5	107.9	107.5
7	2	45.6	115.8	114.3
12	168	54.8	139.2	138.9
13	81	56.1	142.5	142.4
14	1	60.8	154.4	146.8

BOYS—WEIGHT.

	SHREWSBURY.			England, Urban
Age.	No. Examined.	Weight in lbs.	Weight in kilos.	Weight in kilos.
3	33	32.1	14.4	14.74
4	94	35.1	15.8	16.10
5	111	38.0	17.1	17.34
6	38	40.4	18.2	19.31
7	2	45.38	20.4	21.01
12	168	71.2	32.0	32.45
13	81	75.8	34.1	35.03
14	1	99.0	44.6	38.06

GIRLS—HEIGHT.

Age.	Shrewsbury.			England, Urban
	No. Examined.	Height in ins.	Height in cms.	Height in cms.
3	38	35.8	90.9	90.9
4	80	38.4	97.5	96.7
5	116	41.0	104.1	102.0
6	47	42.4	107.7	107.2
7	4	42.8	108.7	113.4
12	167	55.3	140.5	139.3
13	73	56.8	144.3	144.0
14	1	59.0	149.9	148.7

GIRLS—WEIGHT.

Age.	Shrewsbury.			England, Urban
	No. Examined.	Weight in lbs.	Weight in kilos.	Weight in kilos.
3	38	30.8	13.9	14.29
4	80	34.2	15.4	15.69
5	116	37.6	16.9	16.92
6	47	39.4	21.3	18.44
7	4	39.5	21.3	20.40
12	167	71.5	32.2	32.79
13	73	78.5	35.3	35.94
14	1	72.9	32.8	39.65

There is a general similarity between the averages for Shrewsbury and those for the Urban Districts of England and Wales. The heights generally for Shrewsbury are very slightly greater than the average for England and Wales and the weights slightly less.

The consideration of the weight of a child alone is of very little value, but if the weight is observed at periodic intervals information might be gained as to the child's physical progress. For example, a sudden cessation of increase in weight or a decrease may be the first indication of illness such as phthisis in the same manner as a gradual increase in weight in a case of phthisis is significant of a step towards cure or improvement. Parents should thus be encouraged to weigh their children periodically from a very early age, so as to give them an intimate interest n the health of the children. This is not only advisable in the very early years of life but also after the child attends school.

ANÆMIA.—In the age-5 group, 25 or 4.6 per cent. were found to have anæmia or, as it is commonly called, bloodlessness, and in the age-13 group 101, or 20.9 per cent.

Anæmia, apart from disease, may be due to improper and insufficient food, insufficient sleep and bad hygienic surroundings of the home. Anæmia is often the first evident symptom of tuberculosis and care should always be exercised in examining an anæmic child for this reason.

The condition renders children more susceptible to infection and this fact alone calls for immediate care and appropriate treatment. The treatment indicated includes proper diet, fresh air and regulated exercise, and is practically that which is necessitated in cases of malnutrition of which it is also a symptom.

Were children taught more in the open air, under more healthy conditions, anæmia would be less prevalent. Many of the teachers in the schools, whenever the weather allows, open the windows of the school rooms as much as possible, and in fine weather conduct their classes in the open air in the playground. This practice not only benefits the children physically but educationally, since it impresses upon them the importance of fresh air. If the practice were more general among the teachers much good would result both to the children and to the teachers themselves, who would be less likely to complain of the fatigue and headache so commonly complained of after a day's work.

Open-air schools for the treatment of anæmic and weakly children have been instituted by Local Education Authorities in many parts of the country with excellent results. The form of the building is usually of a semi-permanent type built mostly of wood. Its situation should be on high lying ground with an open aspect, so as to get full advantage of sunlight and to have a free circulation of air, but at the same time should be sheltered from cold north and east winds. In Shrewsbury an open-air school to which anæmic and weakly children could be drafted from other schools for short periods would be of infinite value to the children and of pecuniary advantage to the Education Authority, which would earn grants from the improved school attendance of these children.

CLEANLINESS OF THE HEAD.—As a result of routine medical inspection the following percentages of children were found to be affected with pediculosis :—

Age-5 Group.			Age-13 Group.		
Boys.	Girls.	Both Sexes.	Boys.	Girls.	Both Sexes
0.4	11.0	5.7	—	15.7	7.7

These figures indicate that the age-13 group is more affected than the age-5 group, and that those affected are chiefly girls, a very small and almost negligible number of boys being affected.

A better idea of the condition of the heads of the school children is obtained from the figures indicating the results of the routine inspection by the School Nurse of all the heads of school children. This inspection was first undertaken in 1910 for the purpose of dealing not only with pediculosis but also ringworm. These inspections, which are carried out without any warning being given to either teachers or children, have resulted in great amelioration of the conditions at first found. Whenever a child is found with pediculosis a notice is sent to the parents giving instructions how to cleanse the head and requesting the head to be dealt with without delay.

Should the School Nurse find the condition of the child so bad as to necessitate exclusion, or should she find a suspicious case of ringworm, the case is seen by the School Medical Officer, who excludes the child where necessary. As the nurse goes to the school without any warning the children are found under the same conditions in which they usually attend school, and as the parents and children dislike receiving the notices the uncertainty of the date of the examination makes the parents and children more likely to devote greater and more constant attention to cleanliness.

The following table gives the percentages of children affected with a degree of pediculosis requiring notices in the various schools on each of the three inspections carried out during the year.

PEDICULOSIS OF THE HEAD.

SCHOOL.	Department.	1st Exam. Percentage affected.	2nd Exam. Percentage affected.	3rd Exam. Percentage affected.
Abbey ...	Boys	1.1	2.4	9.8
	Girls	4.5	12.5	9.2
	Infants	7.5	5.3	8.0
All Saints' ...	Boys	0.9	0.9	2.8
	Girls	6.6	5.1	6.7
	Infants	5.7	2.0	7.5
Cherry Orchard	Infants	1.9	2.1	2.1
Coleham ...	Boys	—	1.2	0.8
	Girls	4.0	8.9	8.9
	Infants	4.5	2.1	6.3
Coton Hill ...	Infants	8.7	3.3	5.5
Ditherington ...	Infants	3.7	12.4	7.2
Lancasterian ...	Boys	0.5	—	—
	Girls	0.9	3.1	1.2
	Infants	4.1	—	0.9
St. Chad's ...	Boys	4.7	7.6	12.6
	Girls	16.7	8.9	13.9
	Infants	13.3	4.4	8.9
St. George's ...	Boys	1.3	—	—
	Girls	7.4	10.8	9.3
	Infants	9.1	13.2	8.6
St. Giles' ...	Girls & Inft	6.4	1.8	5.6
St. Mary's ...	Mixed	12.3	20.8	14.3
	Infants	5.3	8.0	4.1
St. Michael's ...	Boys	2.3	1.7	—
	Girls	14.8	8.4	18.2
	Infants	3.5	1.6	6.1
Wyle Cop ...	Boys	—	—	—
	Girls	7.1	0.8	1.6
	Infants	1.2	4.8	0.8
		4.9	4.6	5.6

Attempts have been made to still further reduce the percentage and for this purpose, where the parents have received more than two notices from the School Nurse, a special notice, a copy of which is represented below, has been sent to the parents threatening legal proceedings unless attention is given to the condition of the head. Forty-one parents were warned by these notices, which have had a salutary effect.

Private.

SPECIAL CAUTION.

BOROUGH OF SHREWSBURY—EDUCATION COMMITTEE.

......................................191

To

....

Your attention is called to the fact that your child .... is absent from School owing, as the Attendance Committee are informed, to its dirty and verminous condition and you are hereby CAUTIONED that unless the child is speedily made clean and fit to attend school the Attendance Committee will take legal proceedings for recovering a penalty and enforcing regularity and cleanliness.

Clerk to the Committee.

Again, where the condition has been very bad, necessitating exclusion, the parents have been threatened with prosecution unless the hair of the child, nearly always a girl, is cut sufficiently short to get rid of all the nits as well as the pediculi.

The parent of one child was summoned for sending her to school in an unclean condition, and a fine of 5/- was inflicted. Such a prosecution acts as an excellent warning to other careless parents.

The teachers often assist in securing cleanliness by devoting some attention to the condition of children's heads and by sending affected children for examination. Much more might be done by persistent observation by all the teachers and by their requiring all the girls to come to school with their hair in plaits instead of in scattered strands.

Visits of the School Nurse are of great help to the mothers in advising them how to keep the heads of the children clean and in stimulating them to devote greater attention to them in the future.

It will be noticed in the table that certain schools have constantly a high percentage of bad cases, and also that girls are much more affected than boys. The long and straggling hair of the girls renders it difficult to keep the hair clean. In the schools in poorer class districts it would be much better if children attended school with the hair trimmed short, instead of in long straggling and unkempt locks. Short of this, it ought to be possible to impose the penalty of having the hair constantly kept short in cases of repeated default in maintaining cleanliness.

The following table indicates the percentages of children affected at the inspections compared with those in previous years :—

	1st Quar.	2nd Quar.	3rd Quar.	4thQuar.
1910—All Schools	—	—	12.3	3.8
1911— ,, ,,	3.3	3.3	3.1	2.7
1912— ,, ,,	6.0	6.2	3.3	3.1
1913— ,, ,,	4.9	4.6	5.6	—

At the first inspection in 1910 the percentage was 12.3, and this came down to 3.8 in the following quarter. In 1911 the figure remained about the same, but in 1912 it rose somewhat, possibly due to the raising of the standard of cleanliness, but the percentage became less in the 3rd and 4th quarters of last year. A rise in percentage occurred in 1913, but this can be put down to the raising of the standard the number of nits tolerated on the heads being lowered.

CLEANLINESS OF BODY.—Among the children in the age-5 group, 24 or 4.5 per cent were found to have verminous bodies, and in the age-13 group 38, or 7.9 per cent. These percentages are higher than those for the previous year, but the increase is due to the raising of the standard with a view to sending notices demanding attention to the condition to more of the parents. Most of these children came from the poorer quarters of the town, where the conditions are such as to render cleanliness in this respect a very difficult matter. In fact, disinfection of the bed clothes and bedding and the clothes of all the family would be necessary. Restricted cleansing has but a temporary effect. If the Local Sanitary Authority had a steam disinfector along with baths forming a cleansing station, much might be done to relieve the condition of these children, but so long as the cleansing is left to the parents, their efforts to effect a riddance of vermin will be in vain. Repeated warnings are often necessary with respect to the same child or members of the same family.

Three methods of procedure are available when the usual warnings to parents fail to secure cleanliness of the heads of bodies of the children :—

1. Prosecution under the Attendance Bye-laws.
2. Prosecution under Section 12 of the Children's Act, 1908.
3. Prosecution under Section 122 of the Children's Act,1908.

By the first, the child is excluded from school and the parents or guardians are prosecuted for not presenting the child at school in a fit condition ; in the second, proceedings are taken under Section 12 of the Children's Act, either by the Local Education Authority or by the Society for the Prevention of Cruelty to Children, against the parents for wilful neglect ; and thirdly the Local Education Authority, provided it has means of cleansing in the way of a disinfector and cleansing station, may forcibly remove and cleanse the child, and if the parents allow the child to get into such a condition that it is again necessary to cleanse, they may be prosecuted.

The last method of procedure is perhaps the most reasonable when dealing with poor people who are living in poor and squalid surroundings.

It has already been noted that the father of one child was fined 5/- under the Attendance Byelaws for failing to send his daughter to school in a cleanly condition, her head being verminous.

TEETH.—Of 538 " entrants " 179, or 33.3 per cent. had sound teeth, 224 or 41.6 per cent. had four teeth and less decayed and 135 or 25.1 per cent. had more than four teeth decayed, and of " leavers " 93, or 19.3 per cent. had sound teeth, 329, or 68.3 per cent. had four teeth or less decayed, and 60, or 12.4 per cent. more than four teeth decayed. Thus, of 1,020 children examined, only 26.7 per cent. had sound teeth, while 32.2 per cent. had four teeth or less decayed and 19.1 per cent. more than four teeth decayed. These figures indicate a serious condition of things and, if the teeth were examined more particularly by means of a mirror and probe, the number of children having sound teeth would be found to be still less.

In the following table the figures can be seen at a glance and are easily compared :—

	Boys and Girls age 13	Per Cent.	Boys and Girls age 5	Per Cent.	Total	Per Cent.
All teeth sound	93	19.3	179	33.3	272	26.7
4 teeth and less decayed	329	68.3	224	41.6	553	54.2
More than 4 decayed	60	12.4	135	25.1	195	19.1
Total children	482		538		1020	

These figures show, as did those for 1912, that a much larger percentage of children in the age-5 group had sound teeth, but a much higher percentage in this group had more than four teeth decayed. The reason for the difference in the two groups may be that the first or temporary teeth are much more susceptible to caries than the permanent ; it may also be due to the fact that parents are unwilling to take a young child to the dentist to have his teeth cared for, believing that caries is a natural antecedent to the shedding of the temporary teeth.

The following table indicates the number of children in each age-group with sound teeth and with from one to 15 decayed teeth :—

Teeth Decayed.	No. of Boys, age 13.	No. of Girls, age 13.	No. of Boys, age 5.	No. of Girls, age 5.
0	47	46	90	89
1	50	40	30	30
2	39	51	35	33
3	32	37	16	22
4	44	36	30	28
5	14	10	19	23
6	7	7	7	11
7	4	4	4	5
8	5	2	14	16
9	2	—	6	4
10	—	1	4	5
11	1	—	4	—
12	—	1	5	3
13	1	1	1	1
14	—	—	—	1
15	—	—	1	1
	246	236	266	272

In this table it is also seen how very bad the dentures of some of the children in the age-5 group are, compared with those in the older group. For instance, if one takes the number of children having eight decayed teeth and over it is found that there were 14 in the age-13 group and 66 in the age-5 group.

The cleanliness of the teeth of the children is important, as it is generally believed to have a great bearing on the incidence of caries. In the following table are set out particulars regarding the cleanliness of the teeth of the children examined compared with the condition with respect to caries :—

	Number Examined.	Percentage with dirty teeth.	Percentage with very dirty teeth.	Percentage with decayed teeth 1—4.	Percentage with sound teeth.
Boys age 13 ...	246	28.5	5.7	67.1	19.1
Girls age 13 ...	236	23.7	4.7	69.5	19.5
Boys age 5 ...	266	23.7	15.0	41.7	33.8
Girls age 5 ...	272	16.9	15.8	41.5	32.7

These figures are interesting when compared with those for 1912 and show that a general improvement has taken in place in the cleanliness of the teeth in both groups. Undoubtedly children are getting more accustomed to the practice of cleansing the teeth regularly. While in 1912 the percentage of children in the older group having dirty teeth was greater than that in the younger group, the percentage in the former group is now much less than in the latter group, as indicated in the following table :—

	Percentage with very dirty teeth 1912.	Percentage with very dirty teeth. 1913.
Boys age-13 ...	47.4	5.7
Girls age-13 ...	46.4	4.7
Boys age-5 ...	39.6	15.0
Girls age-5 ...	40.1	15.8

A great improvement is evident in the condition of the teeth of the younger children, but a very much greater improvement in the older group.

The following tables give particulars with respect to the teeth of the children in the different schools :—

BOYS AGE 5.

SCHOOL.	No. Examined.	Percentage with very dirty teeth.	Percentage with dirty and very dirty teeth.	Percentage with sound teeth.
Abbey ...	16	18.8	43.7	50.0
All Saints' ...	30	20.0	46.7	30.0
Cherry Orchard	9	—	22.2	44.4
Coton Hill ...	16	43.8	75.0	6.3
Ditherington ...	17	5.9	47.0	23.5
Lancasterian ...	20	5.0	10.0	30.0
St. Chad's ...	21	9.5	38.1	38.1
St. George's ...	34	8.8	29.4	38.2
St. Giles' ...	15	20.0	40.0	53.3
St. Mary's ...	24	12.5	41.7	33.3
St. Michael's ...	21	9.5	28.6	33.3
Trinity ...	17	17.6	41.2	41.2
Wyle Cop ...	26	23.1	42.3	26.9
Total ...	266	15.0	38.7	33.8

GIRLS AGE 5.

SCHOOL.	No. Examined.	Percentage with very dirty teeth.	Percentage with dirty and very dirty teeth.	Percentage with sound teeth.
Abbey ...	19	15.8	42.1	42.1
All Saints' ...	34	26.5	41.2	26.5
Cherry Orchard	11	9.1	27.2	27.2
Coton Hill ...	19	36.8	42.1	—
Ditherington ...	7	14.3	42.8	42.8
Lancasterian ...	23	—	13.0	26.1
St. Chad's ...	29	17.2	48.3	17.2
St. George's ...	37	5.4	21.6	40.5
St. Giles' ...	13	30.8	53.8	30.8
St. Mary's ...	8	12.5	25.0	75.0
St. Michael's ...	23	13.1	17.3	47.8
Trinity ...	30	13.3	33.3	36.7
Wyle Cop ...	19	15.8	26.3	42.1
Total ...	272	15.8	32.7	32.7

BOYS AGE 13.

SCHOOL.	No. Examined.	Percentage with very dirty teeth.	Percentage with dirty and very dirty teeth.	Percentage with sound teeth.
Abbey	... 19	15.8	52.6	26.3
All Saints'	... 19	5.3	42.1	21.1
Coleham	... 44	4.5	36.4	18.2
Lancasterian	... 34	2.9	23.5	17.6
St. Chad's	... 26	7.7	34.6	19.2
St. George's	... 21	4.8	23.8	19.0
St. Mary's	... 8	—	37.5	37.5
St. Michael's	... 47	—	27.7	14.9
Wyle Cop	... 28	14.3	42.9	17.9
Total	... 246	5.7	34.1	19.1

GIRLS AGE 13.

SCHOOL.	No. Examined.	Percentage with very dirty teeth.	Percentage with dirty and very dirty teeth.	Percentage with sound teeth.
Abbey	... 20	10.0	45.0	15.0
All Saints'	... 16	—	31.3	12.5
Coleham	... 38	5.3	26.3	23.6
Lancasterian	... 37	—	21.6	10.8
St. Chad's	... 26	11.5	38.5	19.2
St. George's	... 14	7.1	35.7	28.6
St. Giles'	... 12	—	25.0	16.7
St. Mary's	... 10	—	10.0	30.0
St. Michael's	... 36	8.3	25.0	30.6
Wyle Cop	... 27	—	25.9	11.1
Total	... 236	4.7	28.4	19.5

These figures are so irregular that one cannot come to any definite conclusion from them as to the influence of want of cleanliness on the causation of dental caries. In any case, the tables indicate the very serious state of the teeth of school children. Carious teeth result in septic mischief in the gums and septic obsorption with consequent ill-health. The pain in the teeth and gums prevents proper mastication which results in digestive disturbance. Proper mastication with its accompanying salivation is an important factor in digestion, and when mastication is improperly carried out dyspepsia is apt to follow. There can be no doubt that dental caries results in much suffering and impaired health and remedial measures should be adopted in a thorough manner. These measures include preventive and curative treatment which may now be considered.

Preventive Treatment.—It is well recognised that certain factors affect the incidence of dental caries, notably the kind of diet, both as regards its composition and its toughness and need for mastication, and the neglect of cleanliness of the teeth.

With regard to diet, the tendency is for children to consume soft food which demands little mastication and so the cleansing effect of mastication is lost. Again, the use of carbohydrates, especially sugar, in large quantities appears particularly to have a deleterious action on the teeth, presumably owing to fermentative changes in the food. The question of diet is closely associated with that of mastication which acts as a means of cleansing the teeth ; the softer the diet the less the need for mastication and the greater the liability for food to lodge between the teeth. Between meals the particles of food undergo fermentative changes producing acid which acts on the enamel of the teeth, softening it and allowing bacteria to invade the dentine. Once caries begins the condition, unless it is checked, is progressive, resulting in many cases in sepsis of the gums and ill-health.

Prevention consists in the use of tough and hard foods demanding mastication, the limited consumption of sweets, especially between meals, and the restricted use of fluids as aids to mastication. Fluids, such as tea, should not be taken to assist mastication, and when partaken of should be drunk after mastication of the food is completed.

Were a tough and hard food adopted generally, there would be no need for artificial means of cleansing, but so long as a complete change of diet is not possible, recourse must be had to the use of a tooth-brush for cleansing purposes. This should be used after meals and especially at night.

Through the School Nurse instruction is given to the parents with regard to the care of the teeth. When a child is found during school medical inspection to have more than four decayed teeth a notice is sent to the parents requesting them to have the child's teeth seen by a dentist. The notice is followed by a visit from the School Nurse who not only gives instruction regarding the care of the teeth, but advises where necessary a visit to the dentist. Her work is chiefly to educate. The teachers, it is satisfactory to record, are taking a very keen interest in instructing the children regarding the care of teeth and during the year charts giving instructions in simple language were issued to each school in the Borough. These are being used as the basis of lessons to the children on the subject.

Curative Treatment.—Conservative dentistry is quite beyond the incomes of most of working-class families. The result of this is that the children merely go to the dentist to get teeth extracted, and this only when caries has far advanced, and seldom in the early stages when a carious tooth can be properly preserved by stopping. Not only has one to contend with the inability of the parents to pay for the treatment by a dentist, but also the prejudice of the parents against having the temporary teeth dealt with. This prejudice results in much suffering to the younger children. A visit to a dentist is educative as well as curative since he always gives advice as to the care of the teeth.

In the Report for 1912 it was stated that the Education Committee had decided to meet the need for dental treatment for the children of poor people by opening a dental clinic. Owing to various delays the clinic was not opened before the year under review had expired, but it was opened in the second week of the present year. The Dental Clinic is situated at the old School Board Offices at the entrance to Wyle Cop School. Here there is a waiting room, with lavatory accomodation and a dental operating room. Children 6 and 7 years of age are treated and a charge is made to the parents depending on their weekly earnings. The children of parents earning between 25/- and 30/- per week are required to pay 6d. per child treated, 30/- to 40/- per week 9d. per child, the children of parents earning less than 25/- are treated free, while those earning over 40/- per week do not receive treatment.

The general arrangement is for the School Dentist to visit the schools with the School Nurse and examine the teeth of all the children 6 and 7 years of age, the nurse entering up the cards while the dentist makes the examinations. Notices are then sent to the parents of those children found to have unsound teeth offering treatment, and asking them to sign a form if they wish the children treated. On receiving the forms the dentist makes arrangements for the attendance of the children at the clinic the whole of the teeth of each child being dealt with, if possible, at one sitting.

The estimated annual cost of upkeep of the dental clinic, apart from rent of rooms, is £64, one-half of which will be refunded in the form of a grant by the Board of Education.

This is a beginning of dental treatment, but it is to be hoped that the treatment will be extended to children of other ages, when experience has been gained in dealing with those at present under supervision.

ENLARGED TONSILS.—The following table gives the percentages found with enlarged tonsils :—

	Age-5 group.			Age-13 group.		
	Male.	Female.	Both.	Male.	Female.	Both.
Slightly enlarged	7.9	11.8	9.9	15.1	10.2	12.7
Much enlarged	14.3	16.5	15.6	13.0	11.9	12.4

Enlarged tonsils is thus a very common condition. When slight enlargement only is present little inconvenience or bad effects are experienced, but when there is marked enlargement not only does there result difficulty in breathing but deafness and disease of the middle ear are apt to supervene as a consequence of pressure on the Eustachian tube connecting the pharynx with the middle ear. The etiology of enlarged tonsils is not exactly known, but there is good ground for belief that they result from repeated action of organisms bringing about hypertrophy of the glandular tissue. This view is supported by the fact that with enlarged tonsils there is often associated enlargement of the submaxillary lymphatic glands. Whether this be the cause or not these children are often found to suffer from repeated attacks of sore throat and appear to be specially liable to the infection of scarlet fever and diphtheria. A predisposition to enlargement of the tonsils appears to exist in certain families, several members often being found to be affected with the condition.

Only children having much enlarged tonsils receive notices requesting treatment, the only treatment which is effective being excision. Slight cases, unless the condition progresses, seldom require treatment, since the enlargement in such cases seems to take a retrogressive step as the child gets older. On account of this fact slight cases should not recieve operative treatment unless the symptoms, such as deafness, difficulty in breathing, or snoring demand it.

ADENOIDS.—This affection was found in 1.5 per cent. of the children in the age-5 group, and in 0.6 per cent. of those in the age-13 group. In all cases notices were served on the parents.

Adenoids is a condition of hypertrophy of the glandular tissue of the tonsils and pharynx which results in a group of symptoms of a more or less permanent character unless early treatment is obtained. In the early stages little change may be noticed, but as the condition progresses it may be seen that the child breathes through his mouth, which is kept constantly open, a result which is due to the blocking of the posterior nares by the growth of grandular tissue. Other serious symptoms later supervene. The nostrils atrophy, the mouth remains permanently open, the teeth become prominent and the upper lip appears shorter. Deafness results from pressure on the Eustachian tube, and as a result of the difficulty in breathing and deafness the child is unable to concentrate his attention and acquires a stupid appearance. Unless treated early the facial deformity becomes permanent, the child's education being at the same time interfered with on account of his inability to concentrate his attention. Treatment gives most favourable results, and therefore it is important that the condition should be recognised early before the child has sustained any permanent injury.

Owing to the seriousness of the condition it becomes the duty of the teachers to recognise it at the earliest stage and draw the School Medical Officer's attention to the child. After treatment they should constantly see the child gives up the practice of breathing through the mouth, and should give him special exercises. It is extremely easy to recognise the advanced cases of the disease but not so the early cases, but it is a good rule for teachers to treat with suspicion all cases of mouth breathing who should be brought to the notice of the School Medical Officer.

NASAL DEFECTS.—Nasal defects were found in 15, or 2.8 per cent. of the children in the age-5 group, and in 3, or 0.6 per cent. those in the age-13 group. In the former group, 4.9 per cent. of the boys were affected and 0.7 per cent. girls, and in the latter group there were 1.3 per cent. girls but no boys affected. The defects were nasal discharge and nasal obstruction, chiefly the former.

ENLARGED GLANDS IN NECK.—Of the entrants 124, or 23 per cent., had enlarged submaxillary glands, and 7, or 1.3 per cent., enlarged cervical glands, and of the leavers 83, or 17.2 per cent., had enlarged submaxillary glands, and 3 or 0.6 per cent. enlarged cervical glands.

Enlarged glands, both submaxillary and cervical, seldom call for treatment, and only indicate some mischief from which they have become involved. Submaxillary glands become enlarged as a result of infective conditions of the mouth and throat, generally the tonsils and gums, while cervical glands become enlarged as a result usually of infective conditions of the skin of the head, commonly pediculosis and eczema. The figures indicate that enlarged submaxillary glands are much more common than cervical and it is probable that the great attention paid to the cleanliness of children's heads has done much to lessen the number of cases of enlarged cervical glands. Tuberculosis may affect the lymphatic glands in the neck but in none of the children examined were the glands tuberculous.

ENLARGED THYROID.—Enlarged thyroid was found in one child, or 0.2 per cent. in the age-5 group, and in 18, or 3.7 per cent., in the age-13 group. It is noteworthy that of the 18 cases in the older group 6 were males and 12 females. Females, it would appear, are more liable to this affection, the cause of which is at present unknown.

The condition is often found in more than one member of a family. Except when the enlargement is very great, little inconvenience results, but when much advanced difficulty in breathing is experienced.

EXTERNAL EYE DISEASES.—In the age-5 group, 10, or 1.8 per cent., had external eye disease, and in the age-13 group 15, or 3.1 per cent. The defects noted were in the former, 6 cases of squint, and 3 blepharitis, and in the latter, 11 of squint, 2 blepharitis, and 2 conjunctivitis.

EYESIGHT.—In testing eyesight Snellen's test types are used and a degree of vision 6/12ths or less, in one or both eyes, is considered defective. Owing to their inability to read, the children in the age-5 group are not tested in a routine way, but if a teacher suspects defective eyesight, the child is specially tested with Snellen's types when this is possible. With children at this age it is only possible to detect large defects of vision.

Of the boys 13 years of age, 25, or 10.2 per cent., had one eye defective, and 19, or 7.7 per cent. two eyes defective; and of the girls, 34 or 14.4 per cent., had one eye defective, and 43, or 18.2 per cent., two eyes defective. Of all the children examined 12.2 per cent. had one eye defective and 12.9 per cent. two eyes defective, or a total of 25.1 per cent., with defective eyesight requiring treatment. In addition to these, others were found to the number of 28, 12 boys and 16 girls, or 5.8 per cent., who had defective eyesight, but who had proper spectacles fitted. All these cases were under treatment at the Eye, Ear and Throat Hospital, and no case was found which had been treated by anyone other than an ophthalmic surgeon.

Defective eyesight results from too much close eye-work, either in reading or writing or sewing. From the figures alone it would appear that girls are much more liable to defective eyesight, possibly due to the great strain in performing fine sewing. Defective lighting or improper arrangement of the lighting certainly throws a strain on the eyes and causes deterioration of the eyesight.

Teachers should devote greater attention to the arrangement of the lighting of the classroom with respect to the books and black board which the children are called upon to read, and also to the size and character of the type of the school books and the fineness of the sewing done.

A Committee of the British Association considered the question of the influence of school books upon eyesight and in their report suggested classes of type in accordance with the age of the children. The conclusions of the Committee may be quoted, as they are of interest both to teachers and those interested in education.

> " (1) The existence of a very serious amount of visual defect among children of school age is established as a result of official inspection. Some portion of this defect is preventable by greater care in the selection of books."
>
> " (2) It is desirable that a standard of book production should be established, and that the publication of books below standard should cease."
>
> " (3) It appears possible that the adoption by local education authorities of a common standard would render unprofitable the publication of books which failed to reach such standard."

> "(4) It is hoped that this report may assist the responsible authorities in the work of determining the standard of book production requisite for the protection of the eyesight of children so far as it is influenced by the books which the children are compelled to read in school."

As a comment on the conclusions arrived at by this Committee, one might say that immediate effect could be given to the recommendations if the Board of Education prescribed the type of books read and the character of the eye-work which should be undertaken by children of various ages.

EAR DISEASES.—Among children in the age-5 group there were nine, 5 boys and 4 girls, or 1.7 per cent., who had ear disease, and among those in the age-13 group one boy and one girl, or 0.4 per cent. As a particular examination is not made of the ears, which can only be done by means of a special lamp and mirror, an examination which takes a considerable amount of time, it may be that a number of affected children are missed. As the ears of all the children cannot be examined thoroughly, dependence has to be placed on the presence of discharge which may not be evident on the day or at the time of the examination. When one of the parents is present at the inspection reliable information may be obtained, but reliance cannot always be placed on the statement made by the child as to whether he has had discharge from the ears. The condition found was in all cases chronic ear discharge (otitis media) a condition which is very resistant to treatment, giving rise to more or less deafness and sometimes to serious complications, mastoid and cerebral abscess and meningitis. These dangers should always lead one to consider ear discharge as a serious condition demanding immediate remedial treatment.

DEAFNESS.—This condition was noted in 13 children in the age-5 group, or 2.4 per cent., and in 12, or 2.5 per cent. in the age-13 group. The forced whisper test at twenty feet is that which is employed, each ear being tested separately. In several of the cases deafness was associated with ear discharge. Sometimes the teacher is unaware of the deafness, and in two cases the child was said by the teacher to be a little stupid, the stupidity not being recognised to be due to the defective hearing. Deafness may result from enlarged tonsils or adenoids, and in these cases early treatment gives relief. Where middle-ear disease is present treatment is often of no avail, although some improvement may result.

Defective Speech.—Four cases of defective speech were found in the age-5 group, and 13 in the age-13 group. In seven the defect was due to stammering, in seven due to bad lisping, in two nasal intonation, and in one it was due to cleft palate.

Mental Condition.—There are three broad standards of mental condition recognised in school inspection, dull, backward, and mentally defective. The first is only recognisable with difficulty by the medical examiner, dependence being placed on the opinion of the teacher, while the second condition is determined by the personal observation of the examiner with the assistance of the teacher. As to the determination of the condition "dullness," there are wide variations, and the standard of the teachers has to be checked by the medical officer as a result of discussion of the grounds on which the teachers base their opinions. In the age-5 group 4, or 0.7 per cent., were found to be dull, one, or 0.2 per cent. to be backward, and 3, or 0.6 per cent. to be mentally defective, while in the age-13 group 41, or 8.5 per cent., were found to be dull, 2, or 0.4 per cent., backward, and 2, or 0.4 per cent., mentally defective.

The condition of dullness is one which can be dealt with by the teacher in the ordinary class, but that of backwardness is much more difficult to remedy. The mental condition of the backward child at school tends, comparatively speaking, to get worse every year, since he is usually pushed forward with his class from year to year, his proper education in the meantime being neglected. The education he receives is too high, and the simple and progressive lessons which he requires are forbidden him. To deal with the backward children one requires a separate class under the careful supervision of a special teacher.

Heart Disease.—This is a condition which is often not recognised by the parent, and the notice from the School Medical Officer may be the parents' first information regarding it. Two children in the younger group, or 0.4 per cent., and 9 in the older group, or 1.9 per cent., were found to have organic heart disease. It is of the greatest importance that the parents should be informed of this condition, and that it should be recognised early, before any damage is done to the heart by over-exertion. Parents can be advised to pay particular attention to the children affected, to avoid undue exertion and exposure, and can also be guided as to the occupation which is most suitable for such children, an occupation requiring little physical exertion or exposure being essential.

Instructions are given to the teachers with respect to the physical exercises suitable for these children, swimming being excluded on account of its attendant dangers in case of sudden heart weakness.

Lung Conditions.—Under this head are included all defects of the lungs except tuberculosis. All the defects noted were cases of bronchitis, both sub-acute and chronic, in several emphysema being present as a result of the long-standing cough. Twelve children among the entrants, or 2.2 per cent., had bronchitis, and 8, or 1.7 per cent, among the leavers. As the susceptibility to bronchitis is greatest at the younger ages one expects to find a much larger percentage affected with bronchitis among the younger children examined.

Nervous System.—One child in the age-5 group was found to suffer from epilepsy. No other case of functional or organic nervous disease was found.

Tuberculosis.—Under this term are to be included all tuberculous diseases, but the most important from the School Medical Officer's point of view is tuberculosis of the lungs or phthisis. In the age-5 group there were 5 children, or 0.9 per cent., affected with phthisis, and in the age-13 group 4, or 0.8 per cent. Such cases receive particular attention from the School Nurse, who keeps the children under supervision and reports to the School Medical Officer if the child relapses in health. If the child expectorates he is not allowed to attend school, but if the disease is quiescent and no harm results from his attendance at school he is not forbidden to attend. In any case, if the child is not under constant medical supervision or if he is unable to attend school, repeated examinations are made by the School Medical Officer.

Steps are taken to secure medical attention in such cases where no doctor is in attendance.

No cases of tuberculosis of other organs were found among the school children examined.

Deformities.—The number of deformities found among the children in the age-5 group was 5, and in the age-13 group 16, making a percentage of 0.9 in the former and 3.3 in the latter group.

In the younger group the deformities were 3 cases of pigeon chest, one talipes varus, and one genu valgum or knock-knee, and among those in the older group were 5 of deformities of the chest, and 5 of round shoulders. There were three cases of deformity from rickets, 2 in the age-5 group and one in the age-13 group.

VACCINATION.—It would appear that there is a falling off in vaccination, for, although only 6.4 per cent. of children in the age-13 group were unvaccinated, 17.8 per cent. of those in the age-5 group, or approaching three times the percentage of those in the age-13 group, were found to have escaped vaccination.

INFECTIOUS AND CONTAGIOUS DISEASES.—During the routine school medical inspection there were found, among children in the age-5 group, three cases of ringworm and two of scabies, and in the age-13 group, three of scabies only. One case of impetigo contagiosa was also discovered.

Ringworm.—Cases of ringworm are discovered by the systematic examinations by the School Nurse of the heads of all school children. At the three examinations carried out during the year the following cases of ringworm of the head were found :—

		Cases.
First Examination	...	10
Second Examination	...	3
Third Examination	...	2
Total	...	15

There were also excluded 27 cases who were referred by the teachers, in the ordinary course of events, for examination by the School Medical Officer.

Besides these 42 new cases found during the year, there were under supervision 52 cases which remained uncured and continued to be excluded at the end of the previous year. Thus, there were altogether 94 cases of ringworm of the head among school children during the year. Of these, 68 were cured and admitted to school in the same period, while 26 remained uncured at the end of the year.

Number of cases not cured at end of 1912 ...	52
Number of cases found at quarterly examinations by School Nurse	15
Number of cases submitted by teachers, etc. ...	27
Total cases under supervision during the year...	94
Total cases cured and admitted during year ...	68
Total cases not cured at end of year ...	26

Exclusion of Cases.—Up till the 4th October, when treatment of ringworm was first undertaken at the School Clinic, cases were excluded from school until the School Medical Officer certified them to be free from the disease, no child being re-admitted by the teacher until a certificate from the School Medical Officer was produced.

When a child is excluded the parents are requested to bring him to the School Medical Officer for examination every two or three weeks. In this way one is able to see that treatment is being applied and to determine when the child is free from the disease and able to mix with other children without fear of infection.

Treatment.—In previous reports the long periods, for which cases of ringworm of the head were excluded until free from the disease, were pointed out and the Education Committee was urged to adopt some form of treatment which might be the means of securing the early return of these children to school. Treatment by X-rays was recommended, and arrangements for its application were entered into with the Salop Infirmary, but at the last moment these fell through. A scheme for drug treatment was then adopted by the Committee. It was decided that treatment should be offered in all cases of ringworm of the head, and that it should be given by the School Medical Officer, who, when he was satisfied that the treatment was carried out properly, should certify the children for admission to school. The result was that after October 4th, when the treatment was commenced, 20 cases were put under treatment, this being of such a nature as to permit of the children attending school without danger of infection. Four of the cases were cured by the end of the year, leaving 16 cases being treated, and at the same time attending school. Ten others refused treatment, and were thus not allowed to attend school. It is too early to judge of the effect of this treatment and results will only be determinable after an extended application of the treatment.

Ringworm of the skin, apart from the head, is easy to cure, and no difficulties as regards treatment are presented, the child only being kept away from school for two or three days. Fourteen cases of ringworm of the skin occurred during the year.

Scabies.—During the quarterly inspections by the School Nurse 12 cases of scabies were discovered. In addition to these there were 16 other cases excluded. There were also 8 cases excluded in 1912 which were not cured before the commencement of the year 1913. Thus, there were 36 cases under supervision during the year. Of these, 33 were cured before the end of the year, leaving 3 cases still excluded.

Number of cases not cured at end of 1912...	8
Number of cases found at quarterly examinations	12
Number of cases submitted for examination by teachers, etc.	16
Total cases during the year	36
Total cases cured during the year ...	33
Total cases uncured at end of year ...	3

Treatment.—This is a condition, which if properly and thoroughly treated, can be cured in a week. Yet, one case was excluded for no less than 129 days, the average period of exclusion being 42 days. Treatment of cases of scabies was offered and commenced at the School Clinic on the 4th October, and from that date eight cases were dealt with. The average duration of treatment of these children was 14 days, compared with 51 days in the case of the 28 others not treated at the clinic.

The chief difficulty in the treatment of scabies is that the infection remains on the clothing, and unless this can be thoroughly disinfected no amount of drug treatment of the skin will eradicate the disease. Hence a steam disinfector is necessary, and were a cleansing station arranged in connexion therewith, the children could be treated by means of sulphur baths, and at the same time could have their clothes disinfected. This form of treatment is the most efficacious and would save a good deal of trouble to the parents of the affected children, and would enable the children to return earlier to school. A disinfector and cleansing station, it may be remarked here, is also necessary for dealing with verminous children.

To impress upon parents their responsibility with regard to the treatment of children suffering from this condition the Attendance Committee had the parents of a girl summoned before the Petty Sessional Court. The case was adjourned for a week, and—the child being in the meantime cured—the Justices dismissed the summons. A case such as this, on account of the publicity given to it, has a salutary effect in sharpening up the parents to a due recognition of their duties.

Impetigo of Face and Head.—Impetigo contagiosa of the face and head is a fairly common condition which is of an infectious nature, often affecting members of the same family and school playmates. There were 41 cases excluded during the year, 18 of these being of the head and 23 of the face. In addition to these, 9 cases excluded in 1912 were kept under supervision in 1913 before they were re-admitted to school. The treatment is simple, and the duration of exclusion from school does not usually amount to more than a fortnight.

Medical Treatment.

Medical inspection of school children has certainly been the means of securing for them medical treatment and greater attention and care which they would not have received otherwise, at any rate, at so early a stage. One can therefore, as a result, anticipate in the near future great improvement in the health and physique of the rising generation. School medical inspection has revealed defects in children to an extent which was scarcely imagined previously, yet most of these defects are receiving to a greater or less extent medical or other treatment.

Should the parents be present at the inspection the School Medical Officer points out the defects in the children and gives advice as to securing medical or other care where necessary. But if no parent be present a notice is sent advising treatment. In any case a visit from the School Nurse follows. She ascertains if treatment has been obtained, and if it is being properly carried out, and gives advice or assistance in its application. If no treatment has been secured she advises it when required and gives all necessary instructions in the meantime. The School Nurse makes observations regarding the general hygienic surroundings of the home and gives advice as to the need for cleanliness and fresh air. As a consequence of her visit she records on a card relating to each child particulars of the home conditions and the treatment received. When repeated visits are made notes are also entered on the card which is kept filed for reference.

The School Nurse, by repeated visits, is able to see that the child is under a medical man and that the treatment is being carried out, and when the parents are unable to secure medical treatment she is often the means of putting the parents in the way of obtaining it through charitable agencies, especially the Charity Organisation Society, which has been of great assistance in giving aid to the parents of children found defective on medical inspection.

It would appear that there is little difficulty in securing treatment for defective children. Where the parents are unable to afford to pay for a doctor they are usually able to get treatment at the Salop Infirmary, for which there seems to be available a sufficient number of admission tickets, or " recommends " as they are called locally. Many children secure treatment at the Shrewsbury Dispensary, which is an institution supported by voluntary subscription and which provides medical treatment for the children of parents who contribute a small amount per child annually. For affections of the eye, ear, throat and nose, treatment is available at the Eye, Ear and Throat Hospital with which institution special arrangements have been made by the Education Committee for the treatment of school children. Many parents contribute through Friendly Societies to the Salop Infirmary and to the Eye, Ear and Throat Hospital, and are thus able to secure " recommends " for treatment of their children. Only in a few cases is difficulty experienced in securing treatment in necessitous cases and in these the Charity Organisation Society has been of assistance.

For the treatment of cases of phthisis in school children the County Sanatorium at Shirlett is available, and for cases of tuberculosis of bones and joints treatment is provided at the Baschurch Home, where weakly and anæmic children are also often sent for a change of air.

Of 434 children visited by the School Nurse on account of defects found on medical inspection, 180 were found to have received treatment before the end of the year, 246 had not been treated when last visited before the end of the year, while 8 had left the town before the first visit. The large proportion of children not having received treatment may be accounted for by the fact that the inspection of the age-13 group took place in October and November and only a short time had elapsed between the inspection and the visit of the nurse while the visits were made very near the end of the year.

The following table gives the number of visits paid by the School Nurse to defective children :—

	One visit.	Two visits.	Three visits.	Four visits.	Total No. visited.
No. treated ...	102	61	17	—	180
No. not treated ...	139	80	23	4	246
Left town ...	2	6	—	—	8
	243	147	40	4	434

This table shews the extent to which cases are visited whether receiving treatment or not.

As regards 12 children the parents definitely refused treatment, the defects in these children being as follows :—

Defective Teeth ...	6
Enlarged Tonsils ...	4
Defective Eyesight ...	2
	12

The following table indicates the defects in the children who received treatment :—

Defective Teeth	44
Enlarged Tonsils	56
Adenoids	9
Eyesight and Eye Diseases	38
Ear Diseases	10
Deafness	11
Nasal Discharge	4
Heart Disease	5
Anæmia	16
Phthisis and Lung Conditions ...	17
Verminous Heads	20
Verminous Bodies	13
Scabies and Impetigo	5
Mental Defective	1
Total defects treated	249

This table includes the defects of 180 children who had received treatment and of this number 127 children had only one defect requiring attention, the remainder, 53, having more than one.

In the following table are indicated the defects in the children who had not received treatment:—

Defective Teeth	84
Enlarged Tonsils	84
Adenoids	5
Eye Diseases and Defective Eyesight ...	77
Ear Diseases	3
Deafness	9
Nasal Discharge	2
Heart Disease	4
Anæmia	18
Phthisis and Lung Diseases	12
Mental Defective	5
Total defects not treated ...	303

These were the defects found in 246 cases not treated but in 189 children there was only one defect in each, the others having two or more defects.

As regards the treatment of defective conditions of the eye, ear, throat and nose in children, the Education Committee, as already mentioned, have made arrangements with the Governors of the Eye, Ear and Throat Hospital. The Committee pay one guinea per year, so as to become a subscriber, and in addition pay 5/- for each child presented for treatment. The Board of Education sanctioned the expenditure of £10 on treatment at the Eye, Ear and Throat Hospital. This amount does not apply to any expenditure incurred by the Committee in examining children with defective eyesight, which is held by the Board not to constitute medical treatment and so does not require the sanction of the Board.

When the parents are unable to secure treatment of conditions of the eye, ear, throat or nose, they are referred by the Attendance Officer or School Nurse to the School Medical Officer, who reports the case to the Education Committiee. The Committee, after enquiring into the home circumstances, as ascertained by the Attendance Officer, grants the recommends in suitable cases. Recommends are granted only in necessitous cases, but in only two cases were recommends refused, and these were cases where the parents could certainly afford to pay for medical treatment. In no case was any contribution towards the cost of treatment demanded from the parents under the Local Education Authorities (Medical Treatment) Act, 1909, the Committee remitting the cost of treatment in all cases in which recommends were granted.

During the year 65 recommends were provided by the Education Committee for the treatment of the following conditions, and with the results as indicated below :—

Defects.	No. of recommends.	No. having been treated with favourable results.	No. still awaiting treatment.
Eyesight	28	24	4
Tonsils	8	7	1
Eyesight and Tonsils ...	5	4	1
Sore Eyes	8	7	1
Adenoids	3	1	2
Enlarged Tonsils and Nasal Obstruction	1	—	1
Defective Eyesight from injury...	1	1	—
Squint	2	2	—
Ear Disease	5	4	1
Tonsils and Ear Disease ...	1	1	—
Nasal Obstruction	2	2	—
Defective Eyesight and Deafness	1	1	—
	65	54	11

Provision of Spectacles.—There does not appear to be much difficulty in securing spectacles for children requiring them. Arrangements have been made whereby the parents may obtain glasses for school children from the local opticians at cheap rates on presenting prescriptions from the Eye, Ear and Throat Hospital. When the parents have been unable to afford glasses they have been obtained through charitable agencies, usually through the Charity Organization Society.

As regards the treatment of dental defects, it has already been noted, when considering defective teeth, that the Education Committee have opened a Dental Clinic for the treatment of dental defects in children 6 and 7 years of age. It has also been noted previously that provision is made for the treatment of ringworm scabies and other skin diseases by the School Medical Officer.

Action taken to Detect and Prevent the Spread of Infectious Disease.

The teachers and Attendance Officer are of great assistance in controlling the spread of infectious diseases, the former through their weekly returns of absentees and the latter by informing the School Medical Officer of any cases of sore throat or of suspected cases. The weekly returns of absentees include children said to be absent on account of non-notifiable infectious disease, on account of sore throat, which may indicate diphtheria or scarlet fever, or any case in which no definite cause of absence has been given. This form of notification of non-notifiable infectious disease is a most useful means of control, as it enables the School Medical Officer to adopt preventive measures in the early stages of an outbreak, and the School Nurse to visit the homes of the children and give the parents instructions regarding the prevention of spread of infection and the care of the infected children, a procedure which is most useful, especially in the control of whooping cough and measles.

Particular attention is paid to cases of sore throat by the teachers and Attendance Officer, and all such cases, if not already attended by a medical man, are examined and have their throats swabbed for bacteriological examination either by the School Medical Officer at his office or by the School Nurse at their homes. In this way mild cases of scarlet fever or diphtheria may be detected.

Owing to the prevalence of diphtheria and scarlet fever in certain of the schools a Memorandum was issued by the School Medical Officer to head teachers directing attention to these as wel as other infectious diseases and the steps which should be taken by them to assist in their control. A copy of this Memorandum is here represented :—

IMPORTANT.

MEMORANDUM FROM THE SCHOOL MEDICAL OFFICER.

Diphtheria and Scarlet Fever.

I wish to draw your attention to the importance of making a record of any children absent on account of sore throat, or present in school though complaining of sore throat, and of at once giving me particulars of any child so affected. A mild attack of either Diphtheria or Scarlet Fever may simply give a slight sore throat with little other evidences of the disease, yet a mild case may be the means of the disease spreading to other children and attacking them severely. Desquamation or peeling of the skin of the hands is also found after an attack of Scarlet Fever, so that the teacher on recognising such a condition should at once inform me of the fact. When a case of either disease has occurred in the school the teachers should be especially watchful.

Any suspected case in school may be sent to me for examination *any morning between* 9-30 *and* 10 *a.m.*, but children submitted for examination should in all cases be accompanied by a note from the teacher stating the name of the child and the condition to be noted.

Ringworm, Scabies, Dirty Conditions of the Head or Body, Sores of Head or Face, Sore Throat, Defective Eyesight, and Mental or Physical Defects.

Children suffering from the above conditions may be submitted for examination any morning between 9-30 and 10 a.m., but must be accompanied by a note from the teacher stating the child's name and the defecnoted.

Measles, Whooping Cough, Chicken Pox and Mumps.

Children suspected to be suffering from these conditions should NOT be sent to the Borough Health Offices to be examined. The parents should be asked to call in their own doctor, and a note should be made in the Weekly Returns of Infectious Disease, which are forwarded to me every Friday, when they will be visited by the School Nurse if considered necessary or advisable. The teachers should NOT submit such children to me for examination before they return to school, but must admit the children in accordance with the " Regulations as to the Exclusion of Certain Scholars on account of Infectious Disease " to which you should refer. In any case of doubt or difficulty a communication sent to me will receive attention, but the child should not be submitted unless special instructions to that effect are given by me.

Bad Attendance and Malingering.

Cases of bad attendance or suspected malingering must be submitted to the ATTENDANCE OFFICER for consideration. If necessary he will take steps to have the children examined by me but on no account should such children be submitted for examination without special instruction from the attendance officer or myself.

Note.—In future a note will be sent to the head teacher giving information regarding any child submitted for examination.

September, 1913.

Three small outbreaks of Scarlet Fever occurred at different times of the year at the following schools: Coleham Mixed and Infants' Schools, St. Mary's Mixed and Infants' Schools, Coleham School (for a second time), and St. Chad's School. As a result of the active steps taken, the outbreaks were short-lived, and no necessity arose for school closure.

Diphtheria was unusually prevalent during the year, particularly among children attending St. Michael's Infants' and Mixed Schools and All Saints' Infants' and Mixed Schools. Throat swabbing was freely undertaken, the whole of the children attending St. Michael's Infants' School being swabbed on one occasion. No fewer than 757 swabs were taken from school children and examined in the Borough Laboratory, 28 of these being found positive.

The schools were unusually free from Measles during the year, and only a few cases of Whooping Cough occurred. In controlling these as well as other infectious diseases the weekly returns from the teachers are of great assistance, enabling the School Medical Officer to have early notification of cases, and securing early visitation by the School Nurse.

The following were the weekly notifications made by the teachers :—

Whooping Cough	49
Chicken Pox	119
Mumps	572
Measles	33
Sore Throat	73
Ringworm of the head and skin ...	50
Skin diseases, Scabies, etc.	42
Verminous heads, Impetigo, etc. ...	9
Miscellaneous	179
Total number of Absentees ...	1,126

Very few of these cases were not visited, and many were visited more than once, the visits made by the School Nurse to school absentees numbering 1,670.

Exclusion of Children.—Certificates of exclusion are sent to the teacher, duplicates of which are furnished to the Attendance Officer, with respect to children suffering from notifiable infectious disease or contracts. The only two diseases with which we have really got to deal are scarlet fever and diphtheria.

The parents of children suffering from ringworm, scabies, impetigo contagiosa, and verminous conditions of the head and body also receive exclusion certificates, duplicates of which are also sent to the Attendance Officer and the teachers. Whenever an exclusion certificate is given, the child is not re-admitted to school until a certificate of re-admission is given by the School Medical Officer. This certificate is addressed to the teacher, a duplicate being sent to the Attendance Officer.

It is found impracticable to give exclusion certificates for cases of whooping cough, measles, chicken pox and mumps, and dependence is placed on the exclusion of children by the teachers, to whom printed instructions, given in the Report for 1910, are supplied. The teachers are assisted in carrying out these instructions by the School Nurse, Attendance Officer, and School Medical Officer.

School Closure.—School Closure was recommended only once during the year, and this was in connexion with the outbreak of diphtheria in St. Michael's Infants' School. Closure is unusual for diphtheria, but it was resorted to in this case as other measures taken for the control of the disease had failed to have an effect, and it was considered necessary to enable thorough disinfection of the school to be carried out and the sanitary arrangements to be overhauled.

Generally it may be stated that, with few restrictions, any school child may be submitted by the School Nurse, Attendance Officer or teachers for examination any morning between 9-30 a.m. and 10 a.m. and on the occasion of outbreaks of diphtheria or scarlet fever the parents are encouraged to bring the children for examination, a privilege of which they take great advantage.

Relation of Home Circumstances and Social and Industrial Conditions to the Health and Physical Condition of the Children.

The teachers naturally elicit much information regarding the home conditions of the children whom they meet and talk to every day. They are also able to see the effect of the home conditions on the children. Undoubtedly the children by their condition, both as regards clothing and general cleanliness, indicate to a very fair extent the home circumstances and the social conditions of the parents. It is difficult to say that bad housing conditions alone show their effect on the children, but there is no doubt that the condition of the children as regards cleanliness, clothing, and nutrition indicate on the part of the parents carelessness, thriftlessness and poverty, so often combined with drunkenness. Such information as the teacher obtains is recorded on the record cards, and where children are found defective the School Nurse amplifies this information as a result of her personal inspection of the home.

There is no recognised industrial employment for women in the town, and very few women follow daily employment, so that industrial conditions scarcely influence the health of the children.

Blind, Deaf, Mentally and Physically Defective and Epileptic Children.

Three deaf and dumb children are maintained by the Education Committee at special schools, two at Stoke and one at Manchester. The Committee also maintains two epileptic children at special schools.

During the year the question of dealing with mentally defective children was again considered, but the difficulty of finding a suitable school, and the unwillingness of the parents to allow the children to go from home, interfered with any attempts to deal with it.

Under the Mentally Deficiency Act, 1913, little will be done for mental defectives attending the public elementary schools, as those dealt with under the Act belong to the non-educable class. It is to be hoped that legislation will deal on broad lines with the other larger class which is of greater importance, namely, the class of mental defectives who can receive benefit from education.

There has been no occasion to deal specially with physically defective children, and no physically defective children are maintained at special schools.

Methods and Results of Instruction in Personal Hygiene.

At all the schools the Syllabus of the Board of Education, issued in 1909, is usual as a guide for instruction in hygiene and temperance. The teachers, it must be recorded, devote considerable attention to the subject and the results of instruction in the care of the teeth have been especially noticeable. Both children and parents seem to devote more attention to general hygiene and cleanliness and the instruction of the children at school by the teachers and of the parents at home by the School Nurse and Health Visitor must undoubtedly have a lasting effect on the children.

Physical and Breathing Exercises.

Physical and breathing exercises form part of the curriculum in all the schools. These exercises are supervised much more carefully by the teachers than formerly, but there seems to be still further need for care and patience on the part of the instructors chiefly as regards instruction in breathing. Moreover, the exercises must not be done in a mechanical way, as often appears to be the case, and herein lies the difference between set exercises and games which develop enthusiasm and good spirit, and so encourage the development of the body as Nature intended it.

One exercise which has been greatly encouraged by the Education Committee and is so useful in its results to the children, especially in a town such as Shrewsbury which is surrounded by a river, is swimming. The Committee have made it possible for every boy and girl to learn to swim before leaving school. Children between 11 and 14 years of age attend the Public Baths on certain days of the week, according to the school they attend, and under the supervision of the teachers are taught to swim, the lessons in swimming forming a part of their recognised physical exercises. All charges are paid by the Education Committee in connexion with the use of the baths and the use of bathing drawers and towels. Further, prizes have been offered for swimming, and these have acted as a great encouragement to the children to become proficient, and have developed in them a healthy spirit of rivalry so essential to all games.

Miscellaneous Work.

A large amount of work is done by the School Medical Officer at the Borough Health Offices in examining children submitted for special examination by the School Nurse, Attendance Officer, and teachers. Most of this work has already been considered in detail under various heads, but it may be stated generally that the work includes the examination of cases of ringworm and scabies under treatment or excluded from school to determine when free from the disease; the examination of children suspected to be suffering from infectious disease and submitted for examination by the School Nurse, Attendance Officer, or Teachers; the re-examination of certain children found defective on school medical inspection; the examination of attendance cases on the instruction of the Attendance Committee and of cases requiring Recommends for the Eye, Ear and Throat Hospital.

The examinations made at the office may be tabulated as follows :—

Ringworm and Scabies (repeated examinations)	888
Attendance Cases	48
Cases for Recommends	36
Miscellaneous	362
	1,334

THOMAS ORR, M.D., D.Sc.

TABLE I.

Classification of Defects according to Age-Group and Sex.

		AGE-5 GROUP.			AGE-13 GROUP.			TOTAL.		
		Male.	Female.	Both Sexes.	Male.	Female.	Both Sexes.	Male.	Female.	Both Sexes.
Number of Children examined ...		266	272	538	246	236	482	512	508	1020
Clothing	Fair	24	22	46	30	17	47	54	39	93
	Poor	1	7	8	3	1	4	4	8	12
Footgear	Fair	14	20	34	29	15	44	43	35	78
	Poor	6	8	14	5	4	9	11	12	23
Nutrition	Fair	12	19	31	38	28	66	50	47	97
	Poor	3	—	3	—	1	1	3	1	4
Anæmia		12	13	25	47	54	101	59	67	126
Cleanliness of head (Pediculosis) ...		1	30	31	—	37	37	1	67	68
Cleanliness of body (vermin) ...		7	17	24	15	23	38	22	40	62
Teeth	All sound ...	90	89	179	47	46	93	137	35	272
	Less than 4 decayed	111	113	224	165	164	329	276	277	553
	More than 4 decayed	65	70	135	34	26	60	99	96	195
Cleanliness of Teeth	Fair	63	46	109	70	56	126	133	102	235
	Dirty	40	43	83	14	11	25	54	54	108
Tonsils Enlarged	Slightly enlarged ...	21	32	53	37	24	61	58	56	114
	Much enlarged ...	38	45	83	32	28	60	70	73	143
Nasal defects		13	2	15	—	3	3	13	5	18
Other conditions of Mouth ...		—	1	1	—	—	—	—	1	1
Adenoids		7	1	8	1	2	3	8	3	11
Glands enlarged	Submaxillary ...	64	60	124	45	38	83	109	98	207
	Cervical... ...	2	5	7	2	1	3	4	6	10
Thyroid enlarged		1	—	1	6	12	18	7	12	19
External Eye diseases		7	3	10	8	7	15	15	10	25
Defective eyesight	One eye ...	—	—	—	25	34	59	—	—	—
	Both eyes ...	—	—	—	19	43	62	—	—	—
Number with glasses		—	—	—	12	16	28	12	16	28
Ear disease		5	4	9	1	1	2	6	5	11
Deafness		7	6	13	7	5	12	14	11	25
Defective Speech		4	5	9	10	3	13	14	8	2
Mental condition	Dull ...	1	3	4	22	19	41	23	22	45
	Backward ...	1	—	1	1	1	2	2	1	3
	Mental Defective	2	1	3	1	1	2	3	2	5
Heart Disease		—	2	2	4	5	9	4	7	14
Lungs (not Tuberculosis) ...		5	7	12	6	2	8	11	9	20
Nervous system		1	—	1	—	—	—	1	—	1
Tuberculosis of Lungs		3	2	5	3	1	4	6	3	9
Other Tuberculous Diseases ...		—	—	—	—	—	—	—	—	—
Rickets		1	1	2	1	—	1	2	1	3
Deformities		4	1	5	11	5	16	15	6	21
Skin Diseases	Ringworm ...	1	2	3	—	—	—	1	2	3
	Scabies ...	—	2	2	2	1	3	2	3	5
Infectious Diseases		1	—	1	—	—	—	1	—	1
Other Diseases		—	—	—	—	—	—	—	—	—
Unvaccinated...		48	48	96	16	15	31	64	63	127
Number of Parents present ...		105	114	219	50	61	111	155	175	330
Number of Notices to Teachers ...		—	2	2	3	2	5	3	4	7
Number of Notices to Parents ...		92	99	191	101	115	216	193	214	407

TABLE II.

Ratio per cent. of Defects in each Age-Group according to Sex.

		Age-5 Group.			Age-13 Group.			Total.		
		Male.	Female.	Both Sexes.	Male.	Female.	Both Sexes.	Male.	Female.	Both Sexes.
Number of Children examined ...		266	272	538	246	236	482	512	508	1020
Clothing	Fair	9.0	8.1	8.5	12.1	7.2	9.7	10.5	7.7	9.1
	Poor ...	0.4	2.6	1.3	1.2	0.4	0.8	0.8	1.6	1.2
Footgear	Fair ...	5.3	7.4	6.3	11.8	6.4	9.1	8.4	6.9	7.6
	Poor ...	2.3	2.9	2.6	2.0	1.7	1.9	2.1	2.4	2.3
Nutrition	Fair ...	4.5	7.0	5.7	15.4	11.9	13.7	9.8	9.2	9.5
	Poor ...	1.1	—	.6	—	0.4	.2	.6	.2	.4
Anæmia		4.5	4.8	4.6	19.1	22.9	20.9	11.5	13.2	12.3
Cleanliness of head (Pediculosis) ...		0.4	11.0	5.7	—	15.7	7.7	.2	13.2	6.7
Cleanliness of body (Vermin) ...		2.6	6.3	4.5	6.1	9.7	7.9	4.3	7.9	6.1
Teeth	All sound ...	33.8	32.7	33.3	19.1	19.5	19.3	26.8	26.6	26.7
	Less than 4 decayed	41.7	41.5	41.6	67.1	67.5	68.	53.9	54.5	54.2
	More than 4 decayed	24.4	25.7	25.1	13.8	11.0	12.4	19.3	18.9	19.1
Cleanliness of Teeth	Fair	23.7	16.9	20.3	28.5	23.7	26.1	25.9	20.0	23.0
	Dirty	15.0	15.8	15.4	5.7	4.7	5.2	10.5	10.6	10.6
Tonsils Enlarged	Slightly enlarged ...	7.9	11.8	9.9	15.1	10.2	12.7	11.3	11.0	11.2
	Much enlarged ...	14.3	16.5	15.6	13.0	11.9	12.4	13.7	14.2	14.0
Nasal defects		4.9	0.7	2.8	—	1.3	.6	2.5	1.0	1.8
Other conditions of mouth ...		—	0.4	.2	—	—	—	—	.2	.1
Adenoids		2.6	0.4	1.5	.4	.8	.6	1.6	.6	1.1
Glands enlarged	Submaxillary ...	24.1	22.1	23.0	18.3	16.1	17.2	21.3	19.3	20.3
	Cervical	0.8	1.9	1.3	.8	.4	.6	.8	1.2	1.0
Thyroid enlarged		0.4	—	.2	2.4	5.0	3.7	1.4	2.4	1.9
External Eye Diseases		2.6	1.1	1.8	3.3	2.9	3.1	2.9	1.9	2.5
Defective Eyesight	One eye ...	—	—	—	10.2	14.4	12.2	—	—	—
	Both eyes ...	—	—	—	7.7	18.2	12.9	—	—	—
Number with glasses		—	—	—	4.9	6.8	5.8	2.3	3.1	2.7
Ear Disease		1.9	1.5	1.7	.4	.4	.4	1.2	1.0	1.1
Deafness		2.6	2.2	2.4	2.8	2.1	2.5	2.7	2.2	2.5
Defective Speech		1.5	1.8	1.7	4.1	1.2	2.7	2.7	1.6	2.1
Mental Condition	Dull ...	0.4	1.1	.7	8.9	8.1	8.5	4.5	4.3	4.4
	Backward ...	0.4	—	.2	.4	.4	.4	.4	.2	.3
	Mental Defective	0.8	0.4	.6	.4	.4	.4	.6	.4	.5
Heart Disease		—	0.7	.4	1.6	2.1	1.9	.8	1.4	1.4
Lungs (not Tuberculosis) ...		1.9	2.6	2.2	2.4	.8	1.7	2.1	1.8	1.9
Nervous system		.4	—	.2	—	—	—	.2	—	.1
Tuberculosis of Lungs		1.1	.7	.9	1.2	.4	.8	1.2	.6	.9
Other Tuberculous Diseases ...		—	—	—	—	—	—	—	—	—
Rickets		0.4	0.4	.4	.4	—	.2	.4	.2	.3
Deformities		1.5	0.4	.9	4.5	2.1	3.3	2.9	1.2	2.3
Skin Diseases	Ringworm ...	0.4	0.7	.6	—	—	—	.2	.4	.3
	Scabies	—	0.7	.4	.8	.4	.6	.4	.6	.5
Infectious Diseases		0.4	—	.4	—	—	—	.2	—	.1
Other Diseases		—	—	—	—	—	—	—	—	—
Unvaccinated...		18.0	17.6	17.8	6.5	6.4	6.4	12.4	12.4	12.4
Number of Parents present ...		39.5	41.9	40.7	20.3	25.8	23.0	30.1	34.4	32.4
Number of Notices to Teachers ...		—	0.7	.4	1.2	.8	1.0	.6	.8	.7
Number of Notices to Parents ...		34.6	36.3	35.5	41.1	48.7	44.8	37.7	42.1	39.9

INDEX.

Page
Abattoir 24
Adoptive Acts 49
Anterior Poliomyelitis 67

Bacteriological Examinations 49
Bakehouses 41
Births 82

Canal Boats Acts 22
Cleanliness of Children 116
Closure of Houses 34
Common Lodging Houses 19
Consumption (Phthisis) 69
Cowsheds 19

Dairies 19
Deaths 84
Demolition of Houses 34
Diarrhœa 74
Diphtheria 56
Disinfection 50
Drainage 15

Education Commiteee (Annual Report) 93
Enteric Fever 66
Erysipelas 67
Eyesight (School Children) 129

Factories and Workshops 41
Food & Drugs Acts 30
Food Inspection 22

Health Visitor's Work 79
Heights of School Children 113
Hospital (Isolation) 45
Housing (Housing Acts) 34
Houses Let in Lodgings 20

Illegitimate Births 84
Infantile Mortality 76
Infectious Disease 51
Infectious Disease (Schools) 142
Inquests 88
Inspector of Nuisances' Work 18

Page
Measles ... 67
Meat Inspection ... 24
Medical Inspection of School Children ... 93
Medical Treatment ... 137
Milk Supply ... 22
Milk, Dirt in ... 23
Milk, Analysis of ... 23
Milk, Tuberculous ... 23
Milk and Cream Regulations ... 33

Offensive Trades ... 21
Ophthalmia Neonatorum ... 67

Phthisis ... 69
Physical Features of Borough ... 9
Pollution of River ... 14
Population ... 11
Puerperal Fever ... 67

Relief, Poor Law, etc. ... 13
Refuse Disposal ... 17
Refuse Collection ... 17
Ringworm in School Children ... 134

Sanatorium (Borough) ... 45
Sanitary Inspections of District ... 18
Sanitary Condition of Schools ... 96
Scarlet Fever ... 53
Schools, Hygienic condition of ... 96
Schools, Infectious Disease in ... 142
Scabies (School Children) ... 136
School for Mothers ... 81
Sewerage ... 15
Sewage Disposal ... 16
Shelters for Cases of Phthisis ... 72
Slaughter-houses ... 26
Statistical Summary ... 6
Staff ... 4, 45

Treatment, Medical ... 137
Tuberculosis ... 69
Tuberculous Milk ... 23
Typhoid Fever ... 66

Uncertified Deaths ... 88

Water Supply ... 14
Weights of School Children ... 113
Whooping Cough ... 68
Workshops ... 41

Zymotic Death-rate ... 51